

# THE AMERICAN FARMER,



"O FORTUNATOS NIMIUM SUA SI BONA NORINT  
"AGRICOLAS."  
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## INTRODUCTORY.

In assuming alone the duties belonging to our position, we humbly commend our labors to His favor, whose best service is in serving and doing good to His people. We accept the work to which His providence has directed us, as that in which whatever poor capacity we may have, may, probably, be best used in doing His will, and in providing for ourselves and those dependent on us.

The improvement of agriculture is a good thing of itself. It is not a mere fanciful idea, that we owe a filial duty to the mother of our bodies, to care for and to tend her. We were taken out of her bosom; she supplies our daily sustenance; she receives our bodies when we die, to keep them for the last day. A common end of dust and ashes awaits us, and may we not say a common resurrection; for we who believe that out of this dust shall spring new and glorious bodies for ourselves, look also, "according to His promise, for new heavens and a new earth." It is a good and congenial work for man, to aid in restoring the ground which was cursed for his sake; to bring back the earth to her virgin beauty and fruitfulness; to make her capable of bearing men and women, and feeding them from her generous bosom—and to this end to learn and know whatever skill in practice, or research in science may teach him. It is, indeed, to work for Him and with Him, who, dwelling in the highest heaven, deigns to visit and to bless the earth.

"Thou, O God, visitest the earth and blessest it; thou makest it very plenteous.

"The river of God is full of water; thou prearest their corn, for so thou providest for the earth.

"Thou waterest her furrows; thou sendest rain into the little valleys thereof; thou makest it soft with the drops of rain, and blessest the increase of it.

"Thou crownest the year with thy goodness; and thy clouds drop fatness.

"They shall drop upon the dwellings of the wilderness; and the little hills shall rejoice on every side.

"The felds shall be full of sheep; the valleys also shall stand so thick with corn, that they shall laugh and sing."

Men talk of the dignity of a pursuit, and speak of one calling as more respectable than another. There are foolish people, indeed, who think there are pursuits more honorable than agriculture, and who are ambitious of a more ennobling occupation. But what pursuit but that consecrated to His own peculiar service, has ever received such sanction and honor as this, that the great God himself works constantly with us!—watering our furrows, and making them soft with the drops of rain; dropping fatness from His clouds, and making the earth very plenteous; filling our folds with sheep, and our fields with corn; cheering our labors with His ever present light and life, and with lilies that He cares for, and merry songsters which He feeds, making the very hills to rejoice, and the valleys to laugh and sing.

But while the culture of the earth is a pursuit in itself worthy of the best men and best means, it is the tendency of an improved agriculture to elevate the character of those engaged in it, and immediately connected with it, which makes it more especially worthy of our interest. The moderate gains of Agriculture do not tend usually to extravagance and folly. They are made slowly, out of the reach of excitement, and out of the way of temptation. The results of an improved farm, are, a better house to live in, grounds adorned and cultivated, books and papers, education for children, facilities for church-going and for neighbourhood association; not all obtained at once, but increasing gradually with increased means; making

no violent change in modes of living, but working altogether upward, making better men and better women and better children. This we say is the natural tendency of all farm improvement. It makes men better by furnishing them gradually and safely with means of comfort and happiness and self culture.

The great want of this great country is *men and women*; Christian men and Christian women; capable of occupying and replenishing the land, that the heritage which has been redeemed for God's people from the heathen, may be preserved for them from the swarming hordes of European radicalism and infidelity. Such men and women only our farm houses can furnish: there is no vigor of life and health and growth elsewhere, for such a purpose. Our cities need new supplies of health and strength from the country, to maintain themselves; and but for a constant influx of fresh material would perish from the earth in their own corruption. The very men who toil and labor there with greatest energy owe most often their ability to do so, to their early country life.

To improve our Agriculture then, is something more than increasing our supplies of bread. It gives permanence and stability to our means of support. It adorns and beautifies the earth. It enlarges and makes comfortable the Homestead. It furnishes the means of self-culture; softens the roughness of the father; relieves the drudgery of the mother, and trains and educates the child.—These are all influences for good, and they are brought to bear where they will most certainly effect the future life of the country—at the very source of its life.

That the agricultural journal has been one of the most efficient and active agents in the work of improvement, will not now be questioned. "Book Farming" is no longer a term of derision, but journals and books are properly estimated, not as absolute guides to teach the farmer his business, but as useful aids, gathering for him the opinions and practices of various men and different localities; discussing questions of practical interest; bringing to his notice the discoveries of science, and their bearing upon his pursuit; and thus keeping alive the attention of the practical man, and informing his judgment. This is the true scope and object of the agricultural journal, not to impose dogmatically upon its readers the opinion of its editor, but to gather for them, from the best sources, the means of forming their own opinions. The editor may freely make suggestions, and timely memoranda of matters requiring attention; but as to absolute instruction, the best lesson he can teach to the inexperienced farmer is, that in a pursuit subjected to the ever varying influences

of weather, seasons, conditions of soil, and many other circumstances, his last and only sure resort, is a sound, practical judgment—such a judgment as can be obtained only in the experiences of farm life, in combination with intelligent and judicious use of all such helps as books and journals, and a well stored, well educated mind can afford him.

It is with such views we assume the conduct of the *American Farmer*, earnestly trusting to make it a useful, though humble agent, in a field of labor worthy of the best efforts; and the fit associate of the many able co-workers in the same harvest.

## WORK FOR THE MONTH.

### JULY.

#### WHEAT HARVEST.

The harvest not yet concluded, will command now the special attention of the Farmer till it be finished, and the crop made entirely secure. The working of the other crops, is so advanced it may be hoped, that the whole force, may be directed to this important matter. The work of *shocking* the grain demands particular care. A great deal of wheat is lost every rainy season, from the imperfect manner in which the grain is put up. We have reason to think that the method of putting grain up, in what in Maryland, we call "dozens," will keep it better than shocks. It is well described in the *Ohio Farmer*, as follows, by one who says he *knows* it operates well:

1. Grain should be firmly bound in smaller sheaves than it is almost universally found. Loosely bound sheaves cannot be well shocked. They also admit more rain than tightly bound ones.

2. Two men can shock better and more advantageously than one.

3. Let the shocker always take two sheaves, at a time, holding them with his elbow against his side, bringing the heads together with hands well spread upon them. Lift them as high as possible, bringing them with force, in as nearly a perpendicular position as can be, to the ground. Never make the second *thrust*, if the sheaves stand erect, for every one after the first, by breaking the butts, makes the matter worse.

4. Let two persons bring down two sheaves each at the same time, as described above; being extremely careful to keep them perpendicular. \* \* \*

The form of shock at this period, may be represented thus: \* \* \*

5. As lastly stated, two more each, thus: \* \* \*  
The reader will perceive we now have ten sheaves forming a circle as nearly as can be.

6. While one man presses the head of the shock firmly together, let the other *break*, not bend, the two cap sheaves, and place them on, well-spread, in heads and butts.

The main points are, to have grain *well bound*, sheaves to be stood in an *erect position*, and then put cap sheaves on *firmly*, and every gust of wind will not demolish your work.

Grain is usually shocked in this manner: One sheaf is stood alone, another is *leaned* against it, and another, sometimes at an angle of forty-five degrees, "to make them stand up," until a sufficient number is thought to be *leaned* up.

Now the probability is, that there is but one sheaf in the whole shock that has its centre of gravity within its base; as a matter of course, each depends on some other to hold it up. Consequently they twist, and if they do not fall down before the hands get the next one up, most certainly do during the first rain, just when their perpendicular position is most necessary.

This gives a shock of ten sheaves, their butts all on the ground, and their heads well pressed together, and *capped* with a double sheaf spread out well to protect them.

#### CORN CROP.

If the working of the corn is not finished, get along with it as fast as you can. Bear in mind that the earlier this work is done, provided it be *well done*, the better; and that the working should be as near the surface as can be, provided the grass be subdued.

#### TOBACCO.

Get through the "weeding" (the first working with the hoe) as soon as you can after the plants show that they are rooting. It should be done if possible within ten days after planting, and by all means before the grass roots get much hold of the ground. This work should be done with much care, very little rough usage of the hoe against the young plant will destroy it. Let every sprig of grass growing close about the plant be picked away with the fingers. As soon as possible after weeding, use plaister, dropping a small quantity on each plant. If you have preserved a few bushels of ashes to use with the plaister in equal quantities, it will improve the dressing.

After weeding, work in the rows with a small plough running with the bar as near the plants as can be done safely and throwing the earth from the plants. Work in this way in both directions. The next workings should be done with a shovel plough—throwing the earth to the plants. These workings should be continued at intervals of ten days until the tobacco gets too large. It should then be finished off with the hoe, taking out bunches of grass which may have escaped destruction, and dressing the ground, but not drawing earth to the plants.

#### WORMS.

The first "glut" of worms usually make their appearance in July. The tobacco being small, a flock of turkeys kept well to their work usually subdue them. The damage they do at this season is not generally very material. It is important however that they should all be destroyed, as every one which is allowed to pass into the *Horn blower* may propagate hundreds the same season. The great damage usually done by worms is in August, and their increase may be prevented to considerable ex-

tent by destroying every one that makes its appearance now.

#### POTATOES.

Keep the late potatoes well worked until they come in blossom; let the cultivation be level. They do not require hilling or earthing up. A sprinkling of plaister and ashes on the vines, soon after they come up, and again in ten days or a fortnight is a very beneficial application.

#### HAY MAKING.

The crops of clover and orchard grass will have been secured before this time. The Red-top, known among us as herds grass is usually confined to low moist grounds. It should be cut when in bloom.—It loses greatly in value, if allowed to go to seed.

#### TIMOTHY.

This valuable crop requires separate consideration. It is conceded by general consent, to be the most important hay crop cultivated in this country. The following propositions on the subject of Timothy and cutting it for hay, made by a practical and observant Farmer of Ohio, and embodied in an excellent article, which we find in the *Michigan Farmer*, will well repay the careful attention of any one interested in hay culture:

1. That Timothy grass is a perennial plant, which renews itself by an annual formation of "bulbs," or perhaps, more correctly speaking, tubers, in which the vitality of the plant is concentrated during the winter. These form in whatever locality the plant is selected, without reference to dryness or moisture. From these proceed the stalks which support the leaves and head, and from the same source spread out the numerous fibres forming the true roots.

2. To insure a perfect development of tubers, a certain amount of nutrition must be assimilated in the leaves, and returned to the base of the plant, through the stalk.

3. As soon as the process of nutrition is completed, it becomes manifest by the appearance of a state of desiccation, or dryness, always commencing at a point directly above either the first or second joint of the stem near the crown of the tuber. From this point the desiccation gradually progresses upwards, and the last portion of the stalk that yields up its freshness is that adjoining the head. Coincident with the beginning of this process, is the full development of the seeds, and with its progress they mature. Its earliest appearance is evidence that both the tubers and seeds have received their requisite supplies of nutrition, and that neither the stalk nor the leaves are longer necessary to aid them in completing their maturity. A similar process in the union just above the crown of the bulb, indicating the maturity of that organ.

4. If the stalk be cut from the tubers before this evidence of maturity has appeared, the necessary supplies of nutrition will be arrested, their proper growth will cease, and an effort will be made to repair the injury by sending out small, lateral tubers, from which weak and unhealthy stalks will proceed at the expense of the original tubers. All will ultimately perish either by the droughts of autumn or the cold of winter.

5. The tubers, together with one or two of the

lower joints of the stalk, remain fresh and green during the winter, if left to take their natural course, but if, by any means, this green portion be severed at any season of the year, the result will be the death of the plant.

From these five propositions the following conclusions are drawn:—

1. That Timothy grass cannot, under any circumstances, be adapted for pasture; as the close nipping of horses and sheep is fatal to the tubers which are also extensively destroyed by swine if allowed to run in the pasture.

2. That the proper time for mowing Timothy is at any time after the process of desiccation has commenced on the stalk, as noted in the third proposition. It is not very essential whether it is performed a week earlier or later, provided it be postponed till that evidence of maturity has become manifest.

3. All attempts at close shaving the sward should be avoided, while using the scythe, and in gauging mowing machines, care should be taken to run them so high that they will not cut the timothy below the second joint above the tuber.

I have frequently, during the past autumn, pulled up the bulbous roots of Timothy, from the stubble from which a heavy crop had been cut with the scythe, while in flower, for the purpose of studying the changes which were taking place in these tubers, and have found them very similar to those represented above, not only on moist, damp soils, but also on soils comparatively dry. Any farmer can satisfy himself of the correctness of the representations by a little observation in his own fields; and as the point is of practical importance, it is worthy of careful attention.

The facts above alluded to have fallen under the observation of a practical farmer of Middlesex county, who says: "The proper time to cut Herds-grass or Timothy, is after the seed is formed and is full in the milk. It will then give about twenty per cent. more weight than when it is just coming into the blossom, and the cattle will eat twenty per cent. less and keep on their flesh. And I prefer also to cut it at that stage of its growth on account of the roots being better able to withstand the drought. It should be cut four inches from the ground, as most of the Timothy is killed by mowing close and early before it has come to maturity. I have kept Timothy thick and strong in the land six years, by following this method. I have noticed that most of it has died out by once or twice close and early mowing before the grass has come to maturity; if it is dry weather it is sure to die when so cut. I lost a whole field of it by mowing too close and early, and I consider the four inches at the bottom of coarse Timothy of little value."

"If the seed is allowed to ripen it exhausts the soil far more than if cut in the blossom."

Every plant contains certain constituents, which are constantly absorbed and used for its own growth and perfection, whilst it has life. But the moment the life of the vegetable is destroyed, the process of decay begins, and the mucilage, the starch, the sugar, the gluten, are parted with readily, and particularly the sugar, which, being easily soluble is readily washed out by the action of water. This is especially the case, when the water of the plant has been once dried out, and the dead plant is exposed to the action of rain. Hence in the making of hay, the great point is to dry the cut grass so that little or no water shall be left in the plant to promote fermentation, for every one of the constituents above

named will ferment, whenever there is present moisture enough to enable them to change their conditions and thus furnish the heat requisite to promote decay, or that slow combustion which consumes all the nutritious parts of the plant and leaves nothing but straw or ash—a substance of little value as food for stock.

Ripe Timothy grass when cut contains, altogether, about sixty per cent. of water which can be dried out by the sun, or in the process of curing, and this carries with it some of the volatile compounds contained in the sap. Hence the whole theory of haymaking consists in getting rid of the water only which will promote fermentation or decay, in such a way that the least possible portion of the nutritious compounds shall be lost.

The moment the hay is cut, the process of decay commences, and the elements which form the most valued portion begin to undergo changes, that will set them free to be used by other plants which possess life enough to use them. Our practice is, therefore, to spread out the hay so that action of the sun will dry it, as speedily as possible; and sometimes hay cut in the morning is so dry that it may be carried into the barn the same afternoon. This hay is well known to be the best and most valuable in quality. In the barn, it is the case that hay undergoes a slight fermenting process, but as it is exposed to no current of air, and as the heat evolved is not great enough to burn it, little is lost by this last curing. But it is more frequently the case that circumstances will not allow hay to be so speedily cured, and that the cut grass which is first spread, is raked up into small cocks to protect it from the dew or rain. In this state it undergoes, what is called a slight sweating process, but which is really a gentle fermentation, which renders the soluble compounds still more easily washed out, by any rain that may occur, than they were previous to the cock being put up, and which if the grass be again spread to be aired and dried, will permit much valuable matter to be carried away by the very air that evaporates the moisture. So that to make a first rate quality of hay much depends on the activity and good judgment of the farmer, and much on the weather, which he must take advantage of."

#### BUCK-WHEAT.

Buck-wheat may still be sown to the 10th of this month. There is no reason why this crop should be so generally overlooked in our cultivation. It is easily cultivated, yields well on lands not fit to produce wheat, occupies the ground a short time, and makes excellent bread. Buckwheat cakes are not to be despised at breakfast, from November to April, when properly made, and good butter is at command. Every farmer should have an acre or so, if only for his own family. If he is near a good mill and market he will find the surplus very saleable.

Plough well and harrow in seed, applying a moderate dressing of any good manure. Half bushel to three pecks to the acre well sown, makes seed enough.

#### RUSSIA BAGA TURNIP.

This root crop adapts itself more conveniently to our course of cropping, than those which require earlier planting, and is hardly inferior to any of them in intrinsic value. It makes a large yield per acre,



and makes an excellent variety in the winter food of every kind of farm-stock. Even your horse will be thankful for an occasional bite at a whole turnip, and it will do him good.

Have the ground in readiness as early as you can this month. Deep and thorough working, fine tilth, and ample manuring, are necessary to produce a heavy crop. Observe our directions of last month. You may sow as early in this month as the ground may be in good order. If the weather has been hot and dry, wait for moisture enough to insure the coming up of the seed promptly. About the 15th of the month is the best average time for sowing.

Prepare the seed as directed last month, or soak them some hours in fish oil. Then drain off the oil and dry with plaister or ashes, having one part of flour of sulphur, to seven of the plaister or ashes. Immediately on their coming up they are in danger of destruction by fly. Sprinkle them frequently with the plaster and ashes with the sulphur, until they make the rough leaf.

#### WHITE TURNIPS.

Get ground in readiness, when you can, but do not sow before August.

#### OTHER CROPS.

Keep all other growing crops well worked, and all weeds in thorough subjection during the month.

## WORK IN THE GARDEN.

### JULY.

*Cabbages.*—Get your ground in readiness by deep and careful working, and by manuring with rich compost, or otherwise, as you may find convenient, for planting your winter cabbages. Plant them whenever the ground is moist enough. Should there not be rain enough for the purpose, you must resort to watering.

*Celery.*—Make it a point to secure a crop of this excellent winter vegetable. Prepare the trenches early so that they may have the benefit of the rains.

*Preparation of Ground.*—Make the trenches twelve inches wide, and the depth of the spade, throwing out the earth on each side. Let the trenches be four feet apart. After throwing out the earth, put in two to three inches of good and well rotted manure, and throw in with it as much surface soil, mixing them thoroughly together, with an inch or so of the earth from the bottom of the trench.

*Planting.*—Trim the roots and the long stems of the plants, and plant carefully after rain, about six inches apart in the trenches. Water after planting unless the ground be sufficiently wet, and shade with boards or bushes, until the plants take root.

*Turnips.*—A bed of white turnips may be sown at any time during the month for early use. The general crop should not be sown before the 10th of August.

*Broccoli and Cauliflower.*—Plant out these for winter use. Manure and prepare the ground well.—The roots of these, as well as of cabbage plants, may be dipped in fish oil and dried in plaister to guard against the worm, and give a stimulus to the plant.

*Lettuce.*—Set out lettuce plants to leaf in the fall.

*Endives.*—Plant out endives when the ground is wet.

*Bunch Beans.*—Plant out a succession of these for fall use.

*Cucumbers.*—Plant Cucumber seed for pickles.

*Collards.*—Cabbage seed may be sown now to make greens for fall use.

*Tomatoes and Egg-plants.*—Additional plants of these valuable vegetables may be set out to insure an abundance for late use.

*Potatoes.*—Potatoes may be planted as late as the 10th of the month.

*Herbs.*—Gather herbs and dry them in the shade. Before putting them away, tie up and label them. Slips and roots of most sorts may be set out. Water them well in dry weather.

*Weeds.*—Guard carefully against allowing weeds to go to seed. Exterminate "all the sort of them."

*Water.*—Have water at hand, and use it freely whenever there may be occasion.

## THE MARL FORMATIONS, THEIR COMPOSITION AND VALUE. INFUSORIAL ORGANISMS.

MR. EDITOR:—In a former communication I made some remarks on Lime, and its importance as a fertilizer. The marl formations, which have an extended development in this State, and along our Eastern littoral, is of great importance to the Agricultural interests of the country. It is not only valuable on account of the Salts of Lime which it contains, (Carbonate, Sulphate, and Phosphate,) but because of its riches in all the inorganic elements of organic life. The naked eye discerns a portion of these remains, but the microscope reveals more fully its wonderful composition. Having stated, in former articles, my understanding of the mode in which inert inorganic matter is assimilated and prepared, in the occult and marvelous workshop of nature, it may be considered superfluous to refer again to the subject, but its importance to the prosperity of the State, is so great that no efforts to call further attention to the subject, ought to be considered superogatory.

This matter has now a much greater interest than formerly, when the lands of Maryland were in the vigor of virgin freshness; that day has passed, soil that was once prolific and rich, is now in a deplorable condition, and requires recuperation.

With the high and increasing price of labor, how can we compete with the rich lands of the west, which are thrown into market, at a nominal price, and their produce brought to our doors by rapid, economical and daily improving means of communication. If the problem is to be solved, it can only be done by strenuous exertion, with the aid of science, and if possible the co-operation of the State, in keeping the roads and bridges in good working condition, curtailing their present tortuous courses, and where necessary, insti-

tuting new and proper means of communication. That, together with a fostering care to the opening, development, and application of her fertilizing minerals, may do much.

The roads of Maryland are proverbially bad, and if the laws are adequate, they are not executed, which amounts to the same thing as if there were no laws. At those seasons when the farmer is at liberty to employ his team in hauling extraneous substances for the amelioration of his land, he dare not venture, owing to the shocking condition of the public high-ways, and the bad repair of the bridges. Wagons are broken, horses and drivers killed. For months, during the winter season, communication is almost arrested, and those who venture, do so at their peril.\*

These valuable mineral deposits, might as well be in Otaheite for all the good they effect. Those owning such beds might do a much better business so far as profit is concerned, by selling the substance by the bushel, than by cultivating the land. In New Jersey a similar material is sold, but here, as I have said, it cannot be reached, at the season when it would be profitable to haul it.

This substance is composed of the remains of extinct organisms, by far the larger part invisible to the eye, some have retained their forms, but, in the larger portion, form has been obliterated by the weight of time. These remains, of a former period of the world's history, are composed of the identical constituents of animated nature as it now exists. The constituents are in a state to be directly assimilated, and are part of the stock of available food matter, and ready once more to enter into the cycle of change incident to life, whether in the plant or animal. Fleets are employed and millions are invested in bringing Guano from remote Islands, in remote seas, the value of which is infinitely less, than the wealth that lies slumbering at our feet. I hold it to be beyond doubt that the most valuable of fertilizers is animal bone, and it is entirely indifferent whether the bone be from an extinct or living species. All animals, whether beasts of the field, fowls, fish, insects, or plants, are formed of the same material, of which the inorganic portion lies there in such exuberant abundance. Unprofitable wealth! These substances, without which there can be no living thing and after which we are all striving, are neglected, and the poor exhausted soil abandoned to the effects of time, and the recuperative energies of nature when the means are at hand. Surely where such a state of things can obtain, "There must be something rotten in the State of Denmark."—These essentials to life, when present, produce fertility, abundance, wealth and prosperity—when

wanting, the reverse obtains. These substances when in proper activity, are ever changing, ever productive and ever being digested, (if I may use the term,) and what to day makes the flower lovely, or innocence to blush, may to-morrow form part of the venom of the most loathsome reptile.

The soil is plowed, harrowed, thus pulverized. Crops are grown and carried away, the life giving principles are thus removed. Rain falls, and in accordance with the natural law of equalization, the soil is washed into valleys, thence into streams and finally into the ocean, the vast reservoir of nature's economy.

In those solitary depths, nature collects her resources, from which indefinite myriads will be quickened into life; where there is now sea there will be dry land, and probably other orders of creation will be formed who may look at our remains as wonderful and curious evidences of a former state of things.

Thus the world moves on, ever changing, ever progressing, always onward, without which there would be no life.

But speculators tell the farmer, he must have nitrogen, and to procure nitrogen, he must have ammonia, and that guano is the cheapest form in which it can be obtained. Science on the contrary tells us that ammonia is not the only substance from which nitrogen is assimilated, and if it were, though a given quantity of atmospheric air may contain but a comparatively small amount, still by a wise provision of nature, the air is constantly in motion, and bringing from a distance fresh supplies of food. Ammonia is ever being evolved, and its production a natural and inevitable consequence. The amount of nitrogen that enters into organic matter is relatively small, and when we know that nitrogen forms one of the principal constituents of the air we breathe, and that it fills space—that nitric acid is also ever being produced, from which plants assimilate nitrogen—it would appear unnecessary to argue the question of supply. We send ships to the Pacific for the droppings of birds, and permit the droppings in our popular cities, to be swept with the sewerage into the ocean. Strange as it may appear, we are uselessly spending large amounts for that, with which we could dispense. The name of science is so frequently invoked and so singularly used, that we are tempted to say with the poet Beranger, "that we are doing in the name of God that which God knows nothing of." Guano at best is but an expedient; it stimulates land to over exertion, and when used alone, for any length of time, it leaves the soil extenuated, and in a deplorable condition.

If we would but reflect and use our intelligence to collect, apply and turn to our advantage the abundant resources that exist around us, we would not consider it necessary to navigate the deep in search of fertilizers, the cost of which overbalances the ability to use it for recuperating the exhausted soil.

It has been stated, it is known, that water containing infusoria, microscopic organisms, which is so much animal matter, and the extraordinary fertilizing effects of irrigation is due to that influence. Some of your readers may not know, that in certain parts of the world, special laws are enacted for the government of all that appertains to irrigation, and that corps of engineers are maintained at public expense to manage what here is entirely neglected. The aborigines of certain

\*To give an instance in my own immediate neighborhood, I will state, that here, at the distance of three or four miles of the national Capital, a main public thoroughfare on which I live, is almost impassable (and at times wholly) during the winter. The soil is a tenacious clay, the road circuitous and much travelled, and thousands of cattle are driven over it from the South and West, to the Northern cities. Proprietors living on the route have, to suit their own views, restricted its width to a bare passage, and thrown it from its legal bed to their boundaries. Empty wagons and carts have stood for weeks, half buried, and defying extraction. Such is the state of Legislation upon roads in Prince George's county, that five years have elapsed in vain efforts to have the road put in travelling condition. There are others who have known the road for half a century, and they say that in that time its condition has not changed. I might relate incidents of travel that have occurred before my door that would be amusing, if less serious.

parts of this continent are known to have given singular care and attention to the subject. There are remains of works for that purpose still extant which excite admiration.

Time and labour have been used in exhausting the soil of that which nature had been ages in collecting. It would be strange if it could be restored in a day and without order.

It has been said that science has done but little or nothing for agriculture; my own impression is quite the contrary. Among the many thousand facts that science has revealed, there is one on which the substance lime has an important bearing. Analysis has shown that a barren soil may contain all the constituents of one that is eminently fertile, which proves that fertility does not depend so much upon the constituents, as upon the manner in which those constituents are combined, and I am pleased to know that those views long entertained are corroborated by Prof. Voelcker. — Lime has a chemical action when placed in contact with other substances, changing the combinations and producing fertility without other addition. — It is not very material in what form the lime be added; if it be added caustic it soon passes to the state of carbonate, in which form it is found in Limestone, Chalk, as also in Shells, Marl, &c., but the last two contain other salts of lime, mixed or combined with other substances. By adding lime to land naturally poor or sterile, it may be made to produce largely, and by continued cultivation, go on yearly bearing a heavier and heavier burthen.

The difference between the addition of organic and inorganic manures is simply this. It is true that all organic manures contain a part immediately available. The ash portion, which exists atomically divided, and passing from one combination into another, or in an evanescent state, is readily assimilated, or rather in the best possible condition for assimilation, but that amount is comparatively small in all organic manures, and consequently quantity is wanting. In the substance marl, independent of the lime which it contains, it possesses all the mineral constituents necessary to organic existences. Lime or the carbonate when added in excess, is injurious, and where the soil is entirely composed of it, as in the chalk formations, it is worthless for farming. It is covered by a meagre, thin growth of grass, upon which sheep are fed. The South-downs have given their name to a variety of sheep. It would appear preferable to apply lime by degrees rather than in large quantities at once; so little as a single bushel to the acre is said to produce a marked effect. It is said that land limed to its requirements, is not materially benefitted by Plaster, which is I think a natural consequence. Where the sulphuret of iron exists in such quantities as to injure the quality of the soil, it may be equally benefitted by the addition of calcareous substances. The explanation is simple: sulphuric acid is formed from the decomposition of the sulphuret of iron, and so soon as formed it combines with the lime and forms plaster, gypsum or sulphate of lime. To marsh mud, peat, and such material, the composting with lime gives an admirable and permanently enriching manure. Those substances contain more or less phosphoric acid; which eventually combines with the lime and forms the Phosphate.

The application of lime makes stiff or clay land friable, whilst on the other hand, it has a contrary

effect upon sands. The addition of lime has a decided salutary effect upon certain soils preventing the periodical return of diseases so common to certain portions of this country. White-washing the interior of dwellings in years of sickness or pending prevailing epidemics, has been resorted to time out of mind. It destroys certain varieties of cryptogamic organisms which are known to prevail during the prevalence of epidemics. It may be interesting to some of your readers to know how these infusorial organisms rob the community of untold sums. It is surprising that no efficient remedy has been successfully applied to prevent the destruction of timber when we come to consider the amount invested in ships, tenements and fencing throughout the world—perhaps the cause may not be so well known as the effect, and in my humble opinion the remedies are simple and numerous. It is known that certain varieties of wood decay much more rapidly than others. The *cabra haché*, the locust, and red cedar, are among the most enduring. The first mentioned is found in the tropics, is very hard as its name indicates, (break axe) whilst the cedar is the reverse. Other instances may be adduced to show that durability is not incident upon texture. When wood is sunk deep in the water, or at some distance below the surface of the ground, it has an indefinite endurance—it is also well known that wood kept dry is infinitely more lasting than when exposed to humidity, nor has dry earth any action upon wood. Independent of that slow decay to which all organic matter is subject, and which is called fermentation, oxidation, combustion or erimacausis, there is another far more active, due to organisms. The remedy is obvious. Many may not be aware of the fact that our saliva is alive with infusoria, and that the tartar which is deposited upon our teeth, and causes so much suffering and disease, is due to these invisible creatures, and the said tartar is a variety of coral reef. I have been in the habit of using lime water as a preservative for the last thirty years. The teeth being mainly composed of the Phosphate of Lime, lime has no action upon it. Caustic lime deadening the sensitive nerve, destroys the organic matter that ties the particles of the reef together and kills the animal. Whatever may be the explanation of its good effects, I have used it constantly and advised its service to those I love best. It is simple, harmless and efficient. Any one may prepare lime water. Take, say a porter bottle, fill it with water and add a spoonful of lime, shake it well and allow it to settle, decant the limped solution, and it is ready for use. If the lime water should be too strong and affect the coating of the mouth, add water.

Some friends, with a smile of incredulity, have questioned the possibility of efficient practice on the basis of organisms. The institutions of meadow culture as practiced formerly by the Aztecs and other tribes of this continent, and the Germans now, is in truth nothing more or less than the practical management of organisms, or rather the practice of rendering those invisible workers subservient to production.

When I commenced the above remarks it was my intention to have reviewed Prof. Voelcker's interesting communication published in the journal of the Royal Agricultural Society, of Eng., kindly placed in my hands by my friend Mr. Calvert, but having run on in a rambling manner, perhaps already too far, I must bring the matter to an abrupt

conclusion. If the pages of the Farmer, permitted the insertion of such articles as that of Prof. V. (they are not common) you would receive the thanks of the public and greatly enhance the value of your publication.

Very respectfully,  
The Home, June, 1855. T. G. C.

## MATTERS AND THINGS IN GENERAL

BY PATUXENT PLANTER.

*Mr. Editor* :—I hardly know which is most becoming, to first, congratulate yourself and the public on your being sole Editor and Proprietor of the American Farmer, or to express my regret at the retirement of the old helmsman, who, has so long and faithfully, with zeal and liberality, and industry, conducted a paper which has done so much for the cause of Agriculture. As it is the habit now-a-days to turn from the setting sun and hail the rising, I suppose I must congratulate you, and then pay my respects to Mr. Sands, who I suspect, retires to some rural spot, near your city, to enjoy in ease and plenty, the fruits of a long life, and wear with content the laurels he has won from men and women too, by his steady devotion to Agriculture, and indeed, all the varied beauties in nature—although he intimates that he is about to enter on another and more enlarged sphere—man loves ease and repose.

After an unprecedented wet April and May and a few days in this "leafy month" of June, the sun begins to assert his power, and aid the drowned land and crops. The tobacco plants are too plenty, they could not grow, being too thick, and the land was too wet to be *raked*, so as to give them room. I think planters will be late in setting their crops. Much corn is yet to be planted; that which was planted early could not be worked, and is consequently very grassy—most of it literally hid by the grass. Planters of tobacco and corn are therefore up to their eyes in work. The wheat crop in this region is as yet promising, but thousands of bushels entirely destroyed by a violent hail-storm, which occurred in the latter part of May. The corn crop throughout the country, must be a very late and short one. A friend who has just returned from the West, informs us that little or no corn was planted along the route he travelled through Pennsylvania, Ohio, and Indiana, three great producers of this staple.

Can any of your correspondents or readers give us a method by which to destroy sorrel, which is becoming a great pest on our best lands? Once it was, that only poor uncloved lands were troubled with it. The theory of chemists is that time would correct the acidity in the soil, and without that acid, sorrel would not flourish; but practical experience has fully exploded that theory.

Much good, I am sure, will result from your reply to Dr. Thompson in reference to the question "Who first introduced plaster of Paris or Gypsum?" It will lead to investigation, and I hope will be followed up by the solution of its mysterious agency in the increased growth of most plants. I do not agree with you that Judge Peters was "the first to test its value," for he himself says, that Mr. Jacob Barge "was the first person who applied Gypsum to Agricultural purposes in America." But certainly Judge P. was the chief promoter of its use, and deserves the never ending thanks of the farmers

of the country for the labor and trouble he took in hunting up evidence and publishing the same with his own views under the title of "Agricultural Enquiries on Plaster of Paris, &c.," in 1797. His friend, Wm. West, brother of the great painter, B. West, was among the earliest who used it extensively, and by its use in connection with clover, converted a poor, barren, broken waste, into a blooming productive farm. He was first attracted to it by seeing its effects on some lots around Philadelphia, and used it at once very extensively. These facts I gather from a well written memoir of W. West, who commenced farming as early as 1764, directly after the introduction of red clover.

It would seem that the "children of this generation" are no wiser than the children of that generation in regard to the action of plaster upon clover and other broad leaved plants. As it acts so well on broad, why should it not benefit narrow leaved plants? I believe for one, it does. I know it is of great service in restoring the color and quickening the growth of the English Lawn grass. It seems to be a well settled principle that it acts with more favorable results upon light sandy lands than on stiff, wet soils. General Washington applied as much as twenty bushels per acre on the stiff clay land of Mount Vernon without any effect. Judge Peters considers it a *stimulant*—and says it "must come in contact with animal or vegetable manures, or putrid substances, to give it its proper efficacy." The late valuable experiments reported by Mr. Morton published in the last Farmer, seem to corroborate the views of the Judge; I say *seems*, because Mr. Morton applied the plaster on clean land after the rain, and it being the second successive crop of tobacco, and this to my mind makes a material difference. I cannot believe that without rain or water, plaster will act at all, and in this view I am sustained by one of the earliest friends of the clover and plaster system, and one of the most practical and talented farmers of that day in our State, I allude to Thomas Moore, of Montgomery county, who wrote an able pamphlet on American Agriculture in 1801. The mysteries of Gypsum are yet to be elucidated. I trust the hand of labor and the mind of science combined, will, in the laboratory and the field, each sustaining each, soon make plain this hidden matter.

It is a well received opinion that Thomas Jefferson was the inventor of the first hill-side plow in this country. The facts are, he says himself, in a letter to T. Dalton, Esq., 1817, that his son-in-law, Col. Randolph invented it, though by writing and bringing its advantages earnestly to the public view, Jefferson gets the full credit of the invention. So Jacob Barge is lost sight of in the over-shadowing influences Judge Peters lent to the general use of Gypsum. This remark, however, is not intended to detract at all from the great praise that is justly merited by the learned and venerated Peters. PATUXENT PLANTER.

June 8th, 1855.

**MR. PEYTON JOHNSTON**, Esq., at Richmond, requests us to state that the demand for his Hampshire and other hogs has been so great, that he will not be able to supply further orders before October, when he will have Hampshires, Virginia Graziers, Chesters, and White Berkshires. His Chesters by an imported Boar just arrived.



## A VISIT TO FLORIDA—WEATHER, &amp;c.

SEVENTH SIDE, June 15th, 1858.

To the Editor of the American Farmer:—

Dear Sir:—I have just cut the pages of your June number, and read the announcement of the dissolution of the partnership of its editors,—the valedictory of the retiring senior of the old firm, and your salutatory. As this is not such a transfer or change as will give the patrons of the Farmer any concern for its future, I shall content myself with wishing you all the success you may desire; though our long personal acquaintance would perhaps entitle me to say something more in this connection. That your Journal will continue to be the prudent counsellor and earnest advocate of the class it represents, I am well assured; and this is a matter of no little moment in these days of blind guides.

Since you have so frankly confessed that you are "not insensible to the obligations and responsibilities" of your position; it is but fair that we, your readers, should not only acknowledge, but pay ours. Your word to subscribers, is one fitly spoken,—“like apples of gold in pictures of silver,”—and doubtless the most appropriate as well as acceptable response we could make to it, should be in pieces of those precious metals, with certain well engraved pictures of the American Eagle, or the Goddess of Liberty thereon. I am glad to perceive that the veteran Editor, who has just withdrawn from the ‘Old Pioneer,’ does not intend to cast off the harness, which he has so long and usefully worn; and that the agricultural community may still enjoy the benefit of his talents and experience. With pleasure I acknowledge the valuable aid I have often derived from his labors.

Will you allow me to refer to that universal topic,—the weather; and to ask, how the skies are with you now? Like the Spanish Ambassador in the fogs of London, I wish to send my compliments to the Sun, if I can learn the present whereabouts of that long absent luminary. I am no grumbler, nor, I trust, am I forgetful of God's covenant, betokened by His bow in the cloud; and His promise, that while the earth remaineth, seed-time and harvest shall not cease; but certainly the waters do now prevail so exceedingly in the land, that the prospect for good crops is daily becoming sorrowfully less. As I am not the owner of a Dutch almanac, I cannot venture to predict when we shall be blessed with a change for the better.

One of my neighbors writes to me, *inter alia*, that the condition of his crops has given him “the blues;” and as some of your friends may be just now of the same cerulean complexion, let me quote for their comfort a few words of colored philosophy, which I heard when a child. A venerable negress,—a native of Africa, but rejoicing in her servitude, (the type of a class of servants unfortunately nearly extinct in Maryland) was the admired oracle of us children; and in the credulous innocence of youth, we supposed that her words contained the concentrated essence of wisdom and prophecy. We often consulted this *Delphic Dinah* about the weather upon the coming Saturdays (our holidays), and generally she made us happy by promising serene skies, balmy breezes, and abundant sport with our pin fish-hooks, or bows and arrows. Upon one occasion, however, I remember “old Aunt Dinah” was not so complaisant. Being asked if she thought it would

rain the next day, she exclaimed in reply: “De Lord only knows, honey; but do you all take jus’ what he sen’, and be glad if t’aint de fire and brimstun.”

It is refreshing to know, that at least one corner of our broad Union has escaped the prevailing deluge; and rejoices in pleasant weather and abundant crops. In the State of Florida, which I visited last month, May was as fair as poets and painters represent her—a season of flowers, fruits, birds, sunshine, etc; and rarely before, have her fields been so promising. The crops in Carolina and upper Georgia had suffered, as you know, from frost, and the cotton appeared to be of that *Humble-Bee* variety, which I think Mr. Glover, of the Patent Office, has described. The corn too was sufficiently short, to be distinguished as the *Grass-hopper* sort. But after passing Macon, and in every succeeding mile to the Southward, a decided improvement was perceptible; until reaching middle Florida, where the crops exhibited a luxuriant growth and some of them were being laid by.

Now that the Indians are removed from their Everglade Paradise, and an extensive system of railroads being prosecuted, there seems to be no reason why that State should not become the winter garden of the Union, and supply us with fresh vegetables and fruits, at the season when our northern fields are snow-clad or frost-bound. At no distant day, its soil, climate and resources, will be better known and appreciated. Being remote from the great routes of travel, and essentially a cotton producing country, and therefore not inviting a general emigration, less perhaps is known of Florida, than of any portion of our confederacy. It is probably thought of by most persons, merely as the home of the Seminole and alligator, or as some indefinite and almost inaccessible Southern Ultima Thule. For many years, the most expeditious route to this flowery land, was by sea; and even yet, the road between the present terminus of “the Southwestern Georgia Railway” and Tallahassee, is rather a hard one to travel. The journey is performed in post-coaches, but, from the character of the road, not in post-haste. This stage-route passes through Gadsden county, famous for its fine tobacco. The planters realize prices for it, that ours would consider almost fabulous; and which, in all tenderness for the latter, I refrain from quoting. It is disposed of, too, without the intervention of inspections, commissions, &c., the purchasers or their agents annually visiting the plantations, and paying the cash there.

The prevailing soils of Florida, are the sandy, (pine growing) and, what is designated *dry hammock*,—a clay which produces a heavy growth of the various oaks, hickories, gums, magnolias, &c. These last are the choice planting lands, and stretch in extensive belts through Middle Florida; and are here and there to be found, rising like oases, in the wide waste of pines which borders the Gulf. They are sufficiently elevated and rolling to give a diversified and pleasing aspect to the country. Their endurance, under hard usage, is certainly remarkable. In the system of cultivation pursued on most plantations, the whole breadth of cleared land is annually worked; the only rotation being from cotton to corn, and from corn to cotton; though a friend laughingly remarked to me, that he sometimes *rested* a field by taking a crop of oats from it. In Leon and Jefferson counties, I was shown plantations which

had been under crop for thirty years; and the vast fields of corn, upon them, with lofty tassels even then flaunting in the breeze, were "glorious to behold." The estates are generally so extensive as to preclude the hope of doing much in the way of fertilizing. I learned incidentally, from a gentleman whose hospitable mansion I visited, that he had then growing, 1100 acres of corn, and 1900 of cotton: a great area to be gone over even with guano,—an article not used in the State. To such planters, the question as to the best mode of applying manures, so recently discussed in your pages, would be, I presume, of little practical importance.

As you may suppose, I was not inattentive to the vines of the country, though I have never been in Florida at the proper season to judge fairly of their value. Some fine vines are cultivated in the gardens of Tallahassee. Col. Robert Gamble, has one of unusual magnitude and fertility; which, from his description of the fruit, I suppose to be 'Bland's Madeira.' The grapes upon it were about half-grown and the clusters well filled. Our vines here have but just now cast their blossoms. The Tallahassee gardens, by the way, are worthy of an extended notice—their rare and beautiful floral and pomological productions, with their flocks of feathered denizens, numerous and pre-eminent among which are the ever vocal Mocking-birds; uniting to charm every sense.

Upon some of the plantations, which I visited, I saw the Scuppernong, for the first time, in leaf. Considering how well this vine flourishes at the South, the little attention it requires, and the grateful shade it offers in that sunny land, not to mention the value of its fruit, it seems strange that it should not be universally cultivated. It should be trained over very lofty arbors, affording a free passage beneath for the breeze. The forests appeared to be well stocked with vines, and the fruit of some sorts is represented as large and palatable.

If my time and your pages permitted, I would like to refer to many noticeable things in Florida, which might perhaps, interest you;—its numerous and beautiful lakes;—its rivers sinking into and flowing for miles through subterranean channels; its gigantic springs, one of them (the Wakulla) large enough to float a frigate, and so limpid that the smallest pebbles may be seen upon the bottom, more than a hundred feet below the eye of the observer;—its magnificent and park-like forests;—and above all to its intelligent and high-toned people, the greatest glory of a State.

It was mentioned a few weeks ago, in some of the newspapers, that my distinguished namesake, who has so long and, I doubt not, so correctly represented a district of Ohio, in Congress, is about to publish a book entitled "The Exiles of Florida." From the political complexion of the author, no one, I apprehend, will be surprised if the forthcoming literary bantering should be decidedly black. I am inclined to think that but few of the leaders of that party would object to being exiled to Florida, provided always, that their banishment was upon the express condition that they were to become the owners of plantations and negroes of greater pecuniary value than their present stock in trade. But I am writing more than I intended and perhaps upon subjects which you will interdict. I took up my pen simply to wish you God-speed. Truly, your WELL WISHER.

## TIME OF HARVESTING WHEAT.

To the Editor of the American Farmer:—

Inasmuch as I was greatly injured by reading in your valuable paper, some seven years ago, an article under the above caption; and having recently read in divers country papers, extracts from experiments made in England, on the same subject, advising early cutting, so early indeed that the straw has not changed fully from the green to the yellow appearance, and whilst the grain is in a dough state; this is to caution the people in this country against such experiments. It may do to cut wheat in England in that state, as the climate is very different from what it is in any part of the United States.

In 1852 I cut my large crop of 300 acres, all of which had received at least 300 lbs. of guano to the acre; and some 50 acres of it which had been planted in corn, 500 lbs. to the acre, at two dressings. This wheat was all of very rank thick growth, and was cut when in the dough, and generally in as ripe a state as the directions now going the rounds, called for. The consequence was that my wheat, instead of being much better, was much harder and more expensive to get out; and was so shrivelled that I only got 17 bushels an average per acre, from a field from which I had good reason from the appearance of the growing crop, to expect full 30 bushels. Since then I have cut no wheat while the grain is so soft as to be crushed between the thumb and finger. Once burnt, I dread the fire. Let your wheat get ripe before cutting. The aid afforded by the use of Hussey's, yet UNSURPASSED REAPER, will justify you in waiting, and if the straw is not so good from being cut green and having a portion of shrivelled wheat in it, why burn it and kill the Hessian fly, the joint worm, the red weevil, and many of the fungi. If all these are destroyed, there will yet remain one enemy to the wheat, the fire will not reach—that is free trade. That must be reached some other way. JOHN JONES,

Gum Bush, Delaware.

P. S.—I was reminded in your last number, which was also the last of the 39th year, of the publication of the American Farmer, the first No. of which I read in the city of St. Louis, in April, 1819, and have been a constant reader since, that the Farmer is now commencing its 40th year.—Let all the old readers show their respect for the founder of the paper, the venerable John B. Skinner, and for his present successor, by paying up our dues, and each sending at least one new subscriber. It is true 70 cents for wheat is a low price, and makes the dollars scarce, but we must work and look for better times. J. J.

## CROPS IN KING WILLIAM CO. VA.

To the Editor of the American Farmer:

We shall commence our harvest in a few days, but not with that pleasant assurance of a good return for our labors that we hoped. But for the natural good humor, and generally contented disposition of our farming community, I think the "blues" would prevail extensively, but I suppose a little more economy in our farming operations and self denial in our pleasures for the summer, with greater exertions for the future, will soon repay us for our present loss. In fact some of our bright and pretty lasses, (whose hearts—bless their souls—are as noble and generous as their fathers,) talk seriously of not taking their usual

visit to the watering places this summer, because "father's crop of wheat is destroyed."

The fly played sad havoc in this and the adjoining counties with the wheat during the spring, they were followed by the joint worm, and such fields as escaped the ravages of these rapacious enemies, now show a vast quantity of "scab" which must materially curtail the quantity of grain. The rust has also made its appearance in this drama of ravages, and from appearances is likely to play a conspicuous part.

We give the above as a sample of many letters received as to the state of the crops in different sections. We sympathize with our friends of King William, in their losses, and congratulate them on their equanimity. As to what our correspondent says of the girls, and their foregoing their accustomed jaunt to the watering places, we hope it will not be allowed. Let these young ladies be made to understand how important it is that they should take the best possible care of their health. Let their fathers insist upon their going to the Springs, and *The American Farmer* promises before another year to find out (if possible) a way to kill these abominable bugs, that presume to eat up the crops.—Ed.

To the Editor of the American Farmer:

DEAR SIR:—I have inclosed my subscription to June, '59. "The dollar is wrapped in a small bit of newspaper; this is stuck with a wafer to a sheet of letter paper, and mailed to the editor."

It is a very "just, simple, natural, and beneficial process!" Yours, most respectfully.

June, 18, 1858.

The above we think worth publishing as a model in letter writing. We have received many good specimens during the past month, but this, taking style, matter, and contents into consideration, is about the best. We commend it to the diligent imitation of all who would improve their style of writing.—Ed.

#### ANOTHER GOOD LETTER.

Halifax Co. N. C., June 22d, 1858.

To the Editor of the American Farmer:

Sir—Your excellent "word to subscribers," in the June No. of the Farmer, and that touching suggestion in particular, that your "little successors" acknowledge "that victuals and drink was the chief of their diet" prompts me to wrap the two small gold dollars, which are your rightful due, in a small bit of newspaper, stick it to this sheet of letter paper with a wafer, and mail it to you," with a kind acknowledgment of your deserts and a wish that a shower of gold dollars may make your life, and that of the Farmer a succession of "glorious life-giving summer days."

I believe I owe you for last year, if so, this will pay for the past and to come.

Yours, with best wishes.

— An Agricultural Society has been organized in Lynchburg, with Judge Daniel of the Court of Appeals, President, and a number of prominent gentlemen in and out of the city, Vice Presidents. It promises to be a flourishing institution.

#### HOW TO APPLY GUANO TO GRAIN.

KING WM. CO. VA., June 18th, 1858.

MA. EDITOR:—Your correspondent has recently commenced the honorable occupation of tilling mother earth, and is anxious to know something about the use of Guano—how it should be put in, &c. There are such a variety of opinions afloat in our country on this subject that a novice like myself is quite at a loss what plan to pursue; some say that it is best to plow the Guano in; others to harrow it in, and still another class prefer moistening the grain and rolling it in the manure. I shall have about an equal quantity of Corn-land and Pea-fallow, for wheat next fall and if you can furnish me with the desired information I shall be under many obligations. I will add in conclusion, that our wheat has been very much injured by Fly, Chinch-bug, Joint-worm and Rust. Corn is unusually backward. Oats are looking much better than usual at this season.

A CONSTANT READER.

In reply to the above, and for the benefit of others who like our correspondent may be undecided in the conflict of opinion, we cheerfully give him ours, and it is this: put in the Guano by the same operation that puts the wheat in; whether it be done with harrow, cultivator, plough, or drill.—We are not very nervous about the loss of ammonia, and think the danger of it has been very greatly exaggerated; and we believe the guano is most economically used in close proximity to the seed grain. We prefer having it well mixed with two or three inches of the surface soil; but if the wheat is to be put in with the harrow, put in the guano with that, rather than plough it under deeply out of the way of the young roots.

The moistening the grain and rolling the seed, is perhaps a useful method when the land is capable of bringing a good crop and the guano is wanted to give it a vigorous start. The seed should be moistened with brine, and after being well drained in a basket, dried with Guano.—Twelve or fifteen pounds of guano will dry a bushel of seed, and is a sufficient dressing for the early stage of the wheat's growth. Without having made any experiments to test it fully, we think it not unlikely that this preparation of the seed and a top dressing of 100 lbs. during a rainy season in February or March, would be more economical than the usual application of 300 lbs. in the Fall.—Ed.

#### GIVE THE PLOW AND THE HOE NO REST.

1. In order to prevent the growth of weeds.

2. To insure needed moisture through the deposition of a greater amount of dew, upon which plants so largely depend—softening the earth, so that the moisture that condenses upon the surface may penetrate more deeply, and rendering it more porous for the easier passage of the atmosphere, for condensation in the cooler soil below.

3. To secure a greater absorption of ammonia.

4. To aid in the decomposition of minerals whose elements are food of plants.

## DESTRUCTION OF GARLIC.

Mr. Editor:—On several pasture grounds, or fields on my place, in Baltimore County, I am very much annoyed with garlic, which very much affects the milk and butter, got from the cows pastured thereon. If you know of any mode of getting rid of it, please do me the favor to inform me of it through the medium of your next issue.

Yours, respectfully,

J. R. of H., Balt. County.

Will not some of our friends render our respected correspondent the information we fear we cannot give him satisfactorily.

Garlic, as well as other pests of the farm, usually gives way in a rotation of crops, before good culture, high manuring, &c., with the use of clover. An intelligent farmer of Montgomery county, stated in 1847, in a note to the *American Farmer*, that a miller, near Georgetown, had informed him, that the lands of Chester Co. Pa., which had been greatly infested when he first knew them, with garlic, was now entirely rid of it, wherever the land had been improved by lime or other means, and made to produce luxuriant crops of clover.

The writer also attests his own observation of similar cases in his own county. He says, however, at the same time with regard to permanent sod, "I have seen it luxuriating, in the most luxuriant Timothy meadows, and I have seen it struggling as thick, and nearly as fine as the hair on a dog's back, in a thick sward, which has been subjected to de-pasturage for ten years."

This, we presume, is somewhat the case of our correspondent. Without being able to offer a remedy, we merely suggest, that as garlic springs very early, and sheep are especially fond of it, whether the evil might not be palliated in good measure, by submitting each pasture in turn, first to the ewes and lambs. If the evil is so great as to make it worth the expense, it might be proper to make the enclosures smaller, that the sheep might go through them effectually in shorter time. Every sprig of garlic nipped will hide at once its diminished head for the season, and such a system pursued through a series of years, might cause the weed to die out. For our own part however, we are countryman enough, not to think even Hampton butter much the worse for a little taste of garlic. *De gustibus non disputandum.*—Ed.

THE Mould on decayed fruit, stale bread, moist wood, &c., is shown by the microscope to be plants, bearing leaves, flowers and seeds, and increasing with incredible rapidity: for in a few hours the seeds spring up, arrive at maturity, and bring forth seeds themselves, so that many generations are produced in a day.

In agriculture, it was once the practice to take ancient customs as an infallible guide; nothing was then doubted, nothing investigated, and nothing improved. Now, it is the principle to do nothing without a reason—everything is investigated, and everything is improved.

## Proceedings of the Executive Committee of the Md. State Agricultural Society.

BALTIMORE, June 1, 1858.

The Committee met agreeably to the provision of the Constitution—Present, John Merryman, Esq. President, and Messrs. J. H. McHenry, Oden Bowie, Jas. N. Goldsborough, C. Ridgely, of H. and Frank Cooke.

A communication was received from Dr. S. P. Smith, apologizing for his absence.

The President presented a report of proceedings, in relation to the affairs of the Society since the last meeting of the Committee, which was read and approved.

The subject of the next Cattle Show was then considered, when Mr. J. H. McHenry moved that the Exhibition be opened on the 4th Tuesday in October, (the 26th,) and continue four days, which was concurred in.

The President reported that he had received sundry propositions for the renting of the show grounds, when not used by the Society for its exhibitions, which were considered, and on motion, the President, Corresponding Secretary and Marshal were appointed a committee to make such arrangements as they may deem advisable.

The President presented lists of premiums from sundry persons, suitable for the ensuing exhibition. Mr. McHenry moved, that in consideration of the financial condition of the society, the premiums to be awarded at the next exhibition be honorary awards, which was dissented from.

Mr. O. Bowie moved that a reduction be made in the premiums for cattle of three-fifths from last year's list—that there be but one premium on fat cattle, that the third and fourth premiums for Working Oxen, and the second premium for County Team be stricken out, and that the Oxen in the County Team be permitted to compete for the other premiums—all of which were concurred in.

Messrs. Merryman, McHenry and Cooke were appointed a committee to make the necessary arrangements for the collection of the funds due to the Society.

Mr. McHenry moved that a reduction of three fifths on the rates of premiums of last year be made in the Horse and Sheep departments—that the word "brood" be inserted before the word "mare" in the branch for blooded horses—that in the list of premiums for stallions and mares, in quick draft and saddle horses, the words be added "in each class," and that the word "brood" be also added to the premiums for mares—which were severally concurred in.

On motion, it was also ordered, that the premiums for swine be reduced, from \$15, 10, 8 and \$5, to \$6, 5, 3 and \$2.

It was also ordered that a new class for horses be added to the list, viz: "for general utility, or all work," to include stallions, brood mares, and first and second premium matched horses, and best horse colts and filleys, 3 years old.

The premiums for the best Jack and Jennet were fixed at \$10 each and 2d best do. \$5—best pair mules \$10, and best team not less than 6, at \$15—best imported Jack \$10, do. Jennet \$5.

The premiums, amounting to \$200, for horses not enumerated, was, on motion, ordered to be dispensed with, as was also the 3d class premiums in the trials of speed. Various other changes were made in other departments of the Exhibition,



for which reference is made to the list of premiums for 1858, as published in the American Farmer for July.

On motion, Messrs. Merryman, Sands and Cooke were appointed a committee to examine the Treasurer's accounts.

The death of John S. Crockett, Esq., Vice President for Somerset Co., was announced by the President, and the vacancy was filled by the election of Dr. George R. Dennis, and the Corresponding Secretary directed to notify him of election.

The Committee then adjourned.

Test, SAMUEL SANDS, Gen. Sec'y.

## FLORICULTURE—July, 1858.

Prepared for the American Farmer, by W. D. Brackenridge, Florist and Pomologist, Govanstown, Balt. Co., Md.

**Dahlias**—growing freely, will require attention in pruning and tying up, at least once every ten days; keep the ground loose by frequent hoeings, and should dry weather set in, a liberal supply of water will be of great benefit to them—see last month's directions for training.

**Roses**—of the hardy kinds may now be propagated by layers of the young shoots; if they are growing in a close compact clay soil, it is good to place a handful of sharp sand under the tongue of the layer, this will cause it to throw out roots more freely. Syringe with a solution of oil soap the Tea, Bourbon and Bengal Roses in pots—plunged in beds, to keep down insects. Cut back to a strong bud, in your rose and mixed flower beds, with a knife or scissors, all flower stems on which the blooms are decayed; this will cause a much earlier and finer succession of new blooms to follow.

**Carnations and Picotees**—should be propagated by layers this month.

**Chrysanthemums**—those struck by cuttings last month, should be moved into single pots—re-pot the old plants, pinch the leading shoots well back so as to form bushy specimens.

**Hydrangeas**—may now be propagated readily from cuttings, place the old plants in a shady situation, and water frequently with liquid manure.

**Sow Seeds of Victoria Stocks**—so as to have plants that will bloom in winter.

**Pelargoniums**—if these were not headed down and the cuttings put in last month, this work should be attended to without delay; re-pot the old plants so soon as they begin to grow freely, and in performing this work, the old earth in the ball should be reduced freely, trimming the roots well back, placing the plants in the same sized pots, or even smaller than that from which they were taken.

**Fuchsias**—should be kept in a cool shady place.

**Achimenes, Gloxinias and Gesnerias**—going out of bloom, ought to be watered sparingly.

**Camellias**—cuttings of these may now be put in, and the present is a good season for inarching.

**Orange and Lemon Trees**—but these any time, during the month—when the bark will lift.

**Azaleas**—if cuttings of these have not already been put in, this can be done in the early part of the month, choose half ripe wood for this purpose.

**Tree Paeonias**—may be grafted this month and the following one.

**Sow seed of Chinese Primroses**, and if this was done last month, the young plants should now be

pricked into shallow pans, placing a number of plants in each pan.

**Sow Mignonette Seed**—in order to have blooming plants for the Greenhouse in the fall.

**Collect Seed of Phloxes, Verbenas, Chinese Larkspurs, &c., &c.**—as they ripen; sow these in the proper season, and you may have the pleasure of seeing the work of your own hands prosper.—Keep the flower borders and pots clean from weeds, and see that every thing about your flower department is maintained in a neat orderly manner.

## THE EARTH WORM, AN AGRICULTURAL LABORER.

It is well to make ourselves as much as possible familiar with all the agencies which help to work out the problem of fertility in the soil, and it is wise to learn the uses of what, to our self-conceited wisdom, appear very insignificant and useless creatures. It is not generally supposed that the despised earth worm, who stretches his length on the moist earth in the morning, is of much else use than as food for the early bird or chicken, or at most as bait for the truant boy's fish hook. It will be found by those who will take the pains to investigate, that he is a very useful agricultural laborer, working early and late, and helping those most who help themselves the most. The earth worm does not like to work in poor land. You rarely find him there. But feed your land, and put the elements of richness there, and he will help you to work them up and make the most of them. Walk over a rich pasture ground early in the morning, and see thousands of perforations that they have made, opening the earth through many inches, letting in air and rain, and bringing up from below, a thoroughly worked impalpable earth, and placing it for use on the surface. A scientific writer on Zoology, says:

"The burrowing of earth worms is a process exceedingly useful to the gardener and agriculturist; and these animals are far more useful to man in this way, than they are injurious by destroying vegetables. They give a kind of under tillage to the land, performing the same below ground that the spade does above for the garden, and the plough for arable land, loosening the earth so as to render it permeable to air and water. It has lately been shown that they will even add to the depth of soil; covering burrow tracts with a layer of productive mould. Thus, in fields that have been overspread with lime, burnt marl, or cinders, these substances are in time covered with finely divided soil, well adapted to the support of vegetation.

That this result,—which is most commonly attributed by farmers to the "working down" of the material in question—is really due to the action of the earth worm, appears from the fact that in the soil thus formed large numbers of "worm-casts" may be distinguished. These are produced by the digestive process of the worms, which take into their intestinal canal a large quantity of the soil through which they burrow, extract from it a great part of the decaying vegetable matter it may contain, and eject the rest in a finely divided

state. In this manner a field manured with marl, has become covered, in the course of 80 years, with a bed of earth averaging thirteen inches in thickness."

White, in his *Natural History of Selborne*, says:

"Worms seem to be great promoters of vegetation, which would proceed but slowly without them, by boring, perforating, and loosening the soil, and rendering it pervious to rains and fibres of plants, by drawing straws, and stalks of leaves and twigs into it, and most of all, by throwing up such infinite numbers of lumps of earth, called worm-casts, which being their excrement, is a fine manure for grain and grass."

"Worms probably provide new soil for hills and slopes, where the rain washes the earth away; and they affect slopes, probably to avoid being flooded by water. The earth without worms would soon become cold, hard bound, and void of fermentation, and consequently sterile."

Stockhardt describing a productive soil says:

"It must—and this is the first and principal necessity—possess a crumbling, soft consistence, and this consistence must not be lost through the operations of tillage. The German farmer terms this condition, especially favorable to growth *"gahre,"* (mellow?) Whether this name be derived from *gar*, that is completely, well, or from *gahren*, to ferment, it is in either case expressive, especially in the latter, since it is beyond doubt, that those processes of decomposition taking place in the soil, which may be very properly regarded as a kind of fermentation, contribute particularly to bring it into this condition. What this condition is, and how it arises, I conjecture may be explained as follows. In the more tenacious soils the carbonic acid evolved in the decomposition of humus, forms a little cavity around each particle of humous substance, consequently the whole mass becomes traversed by fine pores, just as the carbonic acid in the fermentation of bread renders the tough mass of paste porous. The legion of animals, from the earth-worm to the infusorium, act in the same way, namely to loosen, since they penetrate and perforate the soil in all directions; as do moreover the roots of plants, in proportion as the tenacity of the soil allows them to spread. The effect will be greatest in all those directions where the soil is kept for a long period undisturbed and in a uniform state of moisture, as is the case when it exists under an overshadowing covering of vegetation. Hence the soft and open consistence which the soil exhibits when it has borne clover, lucerne, rape or lupins, or has lain fallow for some time."

Professor Stockhardt, it will be seen, suggests here, another reason for the good effect of surface covering, in the fine condition produced in the soil, by the workings of "legions of animals, from the earth-worm to the infusorium." This is additional to and not inconsistent with the suggestion of Mr. Clemson, that these "legions" passing through their short-lived course, perish upon the scene of their labours, and leave their remains to nourish a more directly serviceable form of life. Let us respect the earth-worm, therefore as a lowly but not useless fellow-worker with us, and let no one needlessly set foot upon him.

## PRINCIPLES OF MANURING.

The great fundamental principle on which a manure is employed depends upon the fact that every plant during its growth accumulates in its system a certain quantity of matter essential to its existence, which it derives partly from the soil, and partly from the air. From the former it extracts the fixed mineral matters which exist there, and there only; while from both it obtains supplies of its organic food, that is of the water, carbonic acid, ammonia, and nitric acid, required to build up that greatly preponderating portion of its mass, which is combustible. Plants grow naturally without cultivation, because the soil and the air always contain a certain quantity of the elements they require; and as they either die in the spot where they grow, or are consumed by wild animals, these substances sooner or later find their way back to the soil, there to commence a new cycle of similar changes, so that a certain moderate production continues from year to year. But when agriculture comes into operation these conditions are changed; the crop is removed from the soil and consumed elsewhere, and though the air will still afford the elements which are derived from it as abundantly as before, the next generation of plants must find in the soil a diminished supply of the substances it obtains from hence. The necessary consequence is, that if the cultivation of plants be continued, the quantity of valuable matters in the soil becomes less and less, until at length they are so much reduced as to be no longer sufficient to maintain the growth of plants, and the soil is then said to be exhausted.

To restore the fertility of such an exhausted soil, vegetable matters or the dung of animals, which consists to a large extent, of partially decomposed vegetable matters, must be returned to the soil, and herein lies the simple, the oldest, and the most generally employed method of manuring, and the only one possible, so long as the principles on which a manure acts were unknown. But now that the progress of scientific knowledge has enabled us, in place of considering farm-yard manure as a whole, to estimate the advantages derived from each of its numerous constituents, we have come to see that it may not in all cases be an indispensable manure, but may, to a certain extent, be replaced by other substances. In fact, when we inquire more minutely into the cause of the diminished fertility of a soil from which a succession of crops have been removed, it is found rarely to depend on the general exhaustion of all the requisite elements, but most commonly on the deficiency of one or more substances which have been removed by a certain number of crops, while the others still remain in sufficient abundance. And hence the fertility depends not so much on those substances which are abundant, as in those which are most deficient, and the absence of which renders the other useless, the plants cannot grow without an adequate supply of all their constituents. A soil in this condition does not absolutely require farm-yard manure, but may be again made to produce abundant crops by the application of the one deficient substance, which is then called a special manure. When so treated, a soil will retain this renewed fertility for a certain time, but at length becomes again infertile, even under a continued application of this manure, which is then said, in ordinary language, to have lost its effect, although the real reason is that the sup-

ply of a second constituent has been exhausted, and it also must be supplied in the form of a manure.

In all that precedes, we have supposed it to be required merely to keep up a certain moderate fertility, such as an ordinary soil may be supposed to possess in a state of nature. But agriculture does a good deal more than this, and seeks to produce a larger amount of vegetation than the natural soil can do, without extraneous aid—an effect which may manifestly be always produced by supplies of farm yard manure, sufficient to afford a superabundance of all the different constituents of plants.—But it is obvious that we may succeed equally well without it, if, as will frequently happen, some of the constituents be abundant, and their utility be limited by the deficiency of only one or two. Thus, for instance, we may conceive a soil containing a superabundance of all the mineral elements of the plant, but no ammonia or other nitrogenous matter, in which case the produce will be limited by the quantity of ammonia which the plants can obtain from the air during the period of growth, and may be greatly increased by a special manure containing nothing but that substance; so, likewise, it may happen that even where farm yard manure has been applied in very large quantity, the addition of a special manure may still be advantageous; because as ordinary dung consists of the constituents of plants, minus those substances which have been retained by the animals which fed upon them, it may be desirable to supplement the deficiencies so produced; or if the crop to which it is applied happen to require an unusually large quantity of any particular element, it may be advisable to add an extra quantity of that substance, so as to bring out the full effect to its other constituents.

It cannot fail to be observed that, according to the definition now given, there is a very important distinction to be drawn between a general and special manure. When the former is used, all the constituents of plants are added to the soil; and not only is its fertility maintained, but if they be used with sufficient liberality, its productive capacity may be materially increased. Whereas, on the other hand, a special manure adds nothing to the permanent fertility of the soil, but only renders its existing constituents more rapidly available, and hastens rather than defers its exhaustion.—Such, at least, would be the case if special manures were employed alone, a method rarely practiced, and which, in my opinion, should be scrupulously avoided, except under very special circumstances. But if special manures be employed along with farm-yard manure, the result is different. A given quantity of the latter can, of course, produce only a certain amount of crop; but if mixed with a special manure, it is most rapidly converted into vegetable matter, and this is advantageous to the farmer. It may be urged that this is a matter of little moment, and that sooner or later the farmer receives back what he has put into the ground. But this is not the case; during six months of the year manure lying in the ground is undergoing decomposition, although there are no plants to make use of it, and the constituents then set free are in part at least washed away and lost. Even if none of it were lost, it would not be altogether a matter of indifference; for, to take an extreme case by way of illustration, if we suppose a part of the manure to remain undecomposed for fourteen years after its application, it will, if only five per cent. interest on

its price be reckoned, have cost the farmer twice as much as that which was consumed during the year of its application. While, therefore, I consider the use of special manures alone a most injudicious and short-sighted policy, which can rarely be employed with advantage, there is no question that their proper combination with farm-yard manure is really one of the most important improvements ever introduced into the practice of agriculture.—*Dr. Anderson, in a Paper, read before the Highland Agricultural Society of Scotland.*

#### IMPORTING VEGETABLES.

It is not a great many years since Connecticut used to supply the West India Islands with onions and other kinds of vegetables; but now the tide has turned, and a stream of vegetables is pouring in upon us from the West Indies and all other parts of the world. We are certainly getting to be great eaters. With the finest soil and the best climate in the world for all kinds of vegetable productions, we are importing from foreign countries the articles that ought to be produced in our own gardens. Bermuda supplies us with early potatoes and tomatoes; and it seems that the British provinces at the East of us are supplying us with eggs; which are now imported duty free under the reciprocity treaty. Twelve hundred and sixty dozen of Nova Scotia eggs were entered at the custom house in Boston one day last week. We import enormous quantities of dried prunes from France, a kind of fruit that grows abundantly in all our Eastern and Middle States; we import figs from Smyrna, which might be as well grown in North Carolina; grapes from Spain, which can be raised in Virginia; nuts from Madeira, which may be raised in New York; and olives, which might be produced in abundance in nearly all of the Southern States. As for eggs, the value of which is so much greater when they can be warranted fresh, we should hardly think that it could be profitable to import them from abroad. Peaches we are able to raise in as great quantities as we can consume; but we shall not be surprised next to hear of a cargo of this delicious fruit being imported from some neighboring country. Potatoes are brought to us from France, Germany, and England, and a cargo of turnips was lately brought to us from Scotland.—*New York Times.*

#### HOGS vs. DOGS.

"What a dog lives upon will keep a hog!" If anybody doubts the truth of the saying, let him kill his useless dog, and put a pig in the pen and give it the dog's allowance. He will find in a few months that he has a fine fat porker fit to be eaten, a use the dog could not be possibly applied to by any Christian man. There are too many dogs in the country, by far too many—if they had all been killed a year ago, there might be two hundred pounds of good fat pork in the country to balance against every dog so set aside, which would be no inconsiderable item in the present scarcity of supplies. Dogs are a nuisance, and should be taxed. While every farmer keeps his dog, and every slave his dog, and every free negro his two or three dogs, sheep stand a poor chance to get through the world and yield their annual fleece with untorn throats. The increase of the dog population accounts for the scarcity of sheep.—*N. C. Planter.*

# AMERICAN FARMER.

Baltimore, July 1, 1853.

## TERMS OF THE AMERICAN FARMER.

Per Annum, \$1 in advance—6 copies for \$5—12 copies for \$10—30 copies for \$30.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, \$1—1 square per annum, \$10—larger advertisements in proportion—for a page, \$100 per annum; a single insertion, \$15, and \$12 50 for each subsequent insertion, not exceeding five.

Address,

N. B. WORTHINGTON.

Publisher of the "American Farmer,"  
No. 6 NORTH STREET, 5 doors from the corner of Baltimore street, Baltimore.

## OUR OFFICE.

The Office of the AMERICAN FARMER, is Removed from the American Building on Baltimore Street, to the Jarvis Building, on North, 5 doors from the corner of Baltimore Street.

We cordially invite our friends from the country to drop in upon us whenever they can do so. We shall have a most convenient and accessible Office, well furnished with Agricultural Books and Papers, for their inspection, and shall take great pleasure in the opportunity of getting hints from their practical experience, or in giving information and instruction to such as may want it. We wish especially to be better acquainted with our young farmers.

We do not mean to offer an apology, but beg to say to our readers, that we do not offer the present as a specimen number of the "Farmer." If they will bear in mind that in assuming the entire charge of the "Farmer" and undertaking to settle up the affairs of our dissolved partnership, we have alone been doing during the past month, more than the work of two men, they will not be disposed to augur unfavorably of the future from any deficiency they may find in our present issue. We have now pretty well cleared off all unusual hindrances, and are fairly harnessed for our proper work. If we find it too much for us, we shall hitch on another team.

BACK VOLUMES OF THE "FARMER."—We have on hand a considerable number of back volumes of the Farmer, which we will sell for half the subscription price, 50 cents a volume in sheets, or 75 cents bound. They are entirely new, having accumulated from extra numbers printed.

## OUR CORRESPONDENTS.

The favors of our correspondents will attract general notice.

Mr. Clemson's highly interesting paper will be acceptable alike to the scientific and practical reader.

Our old friend, "Patuxent Planter," shows again his pleasant countenance, and deals in his own happy way, with "matters and things" agricultural. He will be welcomed by all.

Our good "Well Wisher," at "Severn Side," offers a contribution as graceful as his climbing vines, and sparkling as his best Catawba.

Major Jones, of Delaware, gives a timely hint on the period of grain cutting. The Major is eminently a man of facts and statistics, and is a safe man to follow. We like the P. S. which follows his letter, especially.

We heartily thank these and many other friends, who have so kindly expressed their interest in behalf of the "Farmer" and its editor, and earnestly appeal again to gentlemen who have at heart the interests we advocate, to help us by occasional contributions to our pages, to make the "Farmer" more truly represent the practical intelligence of the class of men among whom it so largely circulates.

## UNITED STATES AND MARYLAND AGRICULTURAL SOCIETIES.

The Maryland State Agricultural Society, it give us pleasure to state, will hold its Annual Exhibition at their grounds, near Baltimore, as will appear by their programme now published, and the United States Society has concluded to hold its Exhibition on the Fair grounds at Richmond.

We are sorry to find, however, that they have fixed upon the same day, the 26th of October, for opening. We hope our worthy friends, the Presidents, will get up a committee of conference, and that one or the other will recede. Our Maryland farmers, with all their stock of men and cattle, should be at Richmond. Moreover it is our own positive intention to be at both places, and we don't wish to be under the necessity of travelling by telegraph.

## THE WEATHER AND THE CROPS.

The season has been a most remarkable one for the long continued profuse rains, and the very large number of destructive floods and terrific tornadoes. For these latter, visiting all quarters almost, it will be especially memorable.

As to the effect of the weather in shortening the crops generally it is impossible at present to determine. The early promise of the spring which was almost unprecedented, has been sadly blasted. In many locations there has been absolute destruction by hail and storm; in many more fly and joint worm have played havoc, but far



more generally rust and scab have blasted and blighted the wheat. The season has been one also of peculiar difficulty for planting and working the corn. The following extract from a letter from Dr. John R. Woods, of Albemarle, one of the largest wheat growing counties of Virginia gives the tenor of nearly every letter we have received from Virginia or Maryland, and shows in few words the untoward condition of things. "Crops of wheat almost ruined by rust, scab, &c.; corn-fields nearly over run with grass; abundant yield of grass but no time to save any; the continued rains having put every one behind with their farming operations."

An article in the New York Tribune of 19th June, represents the state of the case as to the corn crop as likely to be most disastrous in the great corn growing region of Ohio, Michigan, Indiana, Illinois, Wisconsin and Iowa. It is said that not half the usual quantity of corn was planted at that time, and the ground not then in condition to plant or plough.

There will be the usual systematic effort of course, by interested parties, to make it appear notwithstanding, that the crops will be unprecedentedly large. Farmers owe it to themselves to gather immediately after harvest, in every neighborhood, such statistics of their crops as will tend to put the matter in its true light, whatever that may be. We will be greatly obliged to our subscribers who will furnish us with reliable information as to the probable yield of the grain crops of their vicinity, and of the condition and prospects of the growing crop.

#### PRICE OF GUANO.

The Peruvian Government in consideration of the hard times, and in sympathetic and affectionate regard for the pockets of the consumers of Guano, vouchsafed last Spring, when nobody wanted their commodity, to reduce the price \$10 per ton. Now when the article is somewhat more wanted, it has added on \$5. Upon what principle, it does not profess—we presume because it thinks it can get it. Should Providence favor us with good crops, and nothing unforeseen interrupt the return to a better state of things, the agency will we think likely, piously acknowledge the blessing by adding on \$5 more.

Certainly these good people have a perfect right to charge what they please for their Guano, and our Farmers have just as perfect a right not to buy it. We hope every man will make up his mind clearly and distinctly whether it is worth to him the money asked. If it is, let him buy it, if not, let him keep his money. But let not these precious Potentates of the Islands of bird deposits, have the satisfaction of supposing that their odorous trade is a matter of very special interest to any "free, white, American citizen."

#### A DAY AT THE COLLEGE FARM AND AT RIVERSDALE.

In obedience to a notice of that effect, it became our duty, on the 16th of June, to meet the Board of Trustees of the Agricultural College, on their own grounds, the College Farm. The immediate business of the day was the closing all the contracts for the building and getting the work immediately in progress. A large portion of the materials we found already on the ground, and a very sufficient force of workmen, under Mr. Chapman the experienced and responsible builder, are now fully occupied. The building is entrusted to faithful workmen, and will be under the constant and vigilant supervision of Mr. Calvert and Dr. Wharton, as members of a committee appointed for that purpose.

On the farm, the very efficient direction of the Register, Dr. Wharton, has been working wonders, and commended itself to the heartiest approval of the Board. Bearing with us the impression received on our first visit of inspection in January, and coming suddenly in view of the well ordered premises, it might have been fancied that the Genius of the wonderful Lamp had been invoked to build up in so short a time a structure so goodly as to outside show and inside comfort, with its pleasant surroundings of leafy shade trees, and verdant lawn and neat enclosure. But we remembered that the substantial elements of the scene were not wanting when we first saw it; and that summer growth and paint and white wash, and good honest hard work are marvellous agents in this sort of improvement. The Farm, all around, showed manifestly the effect of well directed labor. A large number of experiments with various fertilizers are in progress upon the several crops. The crop of oats is of very fine growth, and laid off in lands and marked with plainly written permanent labels, exhibits in a very interesting manner the effect of the different applications of portable manures.

The site of the College building was visited and exactly defined by the Trustees. The fine prospect of the surrounding country in its summer dress, and the high well shaded grounds, impressed them more favorably even than before with the character of the location.

After the duties of the morning, in accordance with a previous understanding to that effect, the members of the Board enjoyed the elegant hospitalities of Riversdale, the well known residence of its better known proprietor, Mr. Calvert.

It is needless to say, that in these were embraced whatever might tempt the most fastidious taste of the guest, or contribute to his substantial comfort; and that they wanted in dispensing them, neither the refinement of feminine amiability and grace, nor the sterling heartiness which we expect from a Maryland host.

It is not our purpose to enter into any detailed description of Riversdale, either as to the judicious skill of its farm management, or the ornamental cultivation of its grounds. They have been frequently noted before, in this and other farm journals, and there are triumphs without, and trophies within, which bear abundant testimony in their behalf. Our taste accords with our present convenience in commending it rather in its complete, well ordered, consistent arrangements, and its pleasant, quiet aspect of rural beauty; which combining profitable culture with tasteful and elegant improvement, mark it at once as the home of the thrifty farmer and educated gentleman.

It was a happy thought of our honored hostess, whose zeal in behalf of the Agricultural College so heartily seconds that of her husband, to grace the occasion with a company of ladies, who not only of course, added largely to the pleasure of the day, and contributed in good measure that "flow of soul" which is the most suitable accompaniment of a reasonable feast, but whose position in life, and whose influence as wives and mothers, constitute the most desirable interest which can be invoked in behalf of the College.

The Trustees returned in the late train, with the consciousness of having combined more of profitable labour and pleasurable enjoyment, than can be often brought within the compass of a day.

#### AGRICULTURAL EDUCATION.

We have received from Dr. Wharton, the very able and efficient Register of the Agricultural College, his Report to the Board of Trustees, embracing a brief history of the progress of the Institution, a list of subscribers to its stock, &c., and the plan and the principles on which it is proposed to govern the it. The report is accompanied also with a lithographic representation of the proposed College building, which we are glad to be enabled to present to the readers of the Farmer. Having at several times given the substance of the Report, so far as the history of its progress is concerned, we extract from it only that portion which relates to the principles of its future Government.

Looking always with especial interest and favour on the design of this Institution, and officially connected with it in every step of its progress, we take peculiar pleasure, in presenting it so conspicuously in this our first number, to the numerous readers of the Farmer.

The report it will be seen speaks emphatically, and to the point on the subject of Education. It takes no narrow utilitarian view of the subject, nor calls that education, which is mere professional instruction. The college professes to educate, not to instruct merely. It claims that education

is the unfolding of a boy's faculties, the development of his capabilities, the bringing into action his energies; and that instruction, useful and necessary as it is, is only incidental to the main design. It ignores therefore none of the long established and well approved means of intellectual and moral culture, but engrafts upon the best systems such a degree of physical training and discipline as will develop the frame, and ensure a vigorous, robust, healthy body, as the faithful companion and servant of the intelligent mind.

In what sense then is this an Agricultural College? First in this, that it designs to train the boy physically by the very best means that can possibly be devised for the purpose; by daily, moderate, bodily labor on the farm, in the garden and the work-shop. We doubt if that man, or woman either, is living, who would not be the better now in bodily health and mental vigor, for having had daily from the age of sixteen, two full hours of good strong work with plough or hoe. That then, which best answers the end of physical training, gives the student very useful instruction in all the various processes of agricultural practice, and the system is to that extent agricultural. It is agricultural in directing the students mind, especially to those branches of science, bearing immediately upon agriculture, and to their practical application to the farming operations in which he will be daily trained. It is agricultural in presenting to the student constantly a model of good farming in all its departments, and in setting before him, and training him to the most exact and careful method of agricultural experiment; such experiment as will protect him and his pursuit from the numerous vagaries which take the name of Scientific Theory, and which will tend to build up an Agricultural Science on its only true basis, intelligent practice and experiment in the field.

The report, however, speaks for itself; we commend it to the consideration of the reader.

#### EXTRACT FROM DR. WHARTON'S REPORT.

A lithographic representation of the plan of the proposed College Building, in full, is herewith presented. The present available means of the Institution, will necessarily confine the Trustees, at this time, to the erection of but one wing of the structure—deeply as they regret the necessity which thus limits temporarily their operations, they are not without hope, that the appeal they are about to make individually, and by agents in their respective counties and the cities of Baltimore and Washington, to their patriotic and philanthropic fellow citizens, to aid them in their efforts to erect immediately the entire building, together with a large and commodious workshop, will be successful. Should this be realized, the whole College Building and Workshop will be immediately put under contract. One wing of the proposed structure, will be a building complete in itself—one hundred and twenty feet in length, fifty-four feet

in width, five stories high, with Kitchen, Dining Room, Pantry, Wash Room, &c., in the basement, with eight Lecture and Class Rooms on the principal floor, and Dormitories in the upper stories sufficient for the comfortable accommodation of one hundred and twenty students, and will be so constructed as to insure the most perfect ventilation, and to afford every facility for heating every part of it in the most approved manner, by hot water or heated air.

While the Trustees are constrained by the amount of means now at their command to limit their operations, they desire to make known distinctly the ultimate ends and purposes by which they are governed.

Their scheme then is first, an Educational Institution in its most comprehensive sense. Its definition of education is that it is the united symmetrical development and instruction of the religious, the intellectual and the physical qualities of man. It recognises the whole man in all the departments of his being as the object of its care. Its aim is not to instruct merely, not to impart knowledge merely, but to awaken, to develop, to train and discipline all the latent, inborn powers and faculties of the man, that he may command them for the high and noble uses of which they may be capable, or for which they were designed.

It is not to be supposed then, that what we designate an Agricultural College, aims merely at professional instruction in agriculture. The plan undoubtedly embraces such instruction, but it is far more comprehensive. It claims for the farmer or the mechanic, or for whosoever its care may be sought, first, his development as a man, trained and fitted to the full extent of his capacity, for all the duties of a man and a citizen. To this end it offers him the advantage of the most approved systems of moral and intellectual culture; and super-adds to these, for his physical training, moderate and systematic exercises in the field and workshop, as the best means of laying the foundation of future health and energy, in a well developed, robust, physical constitution.

Thus incidentally if not primarily, the scheme embraces the best practical training in agriculture and mechanic arts. The student learns the various useful details of agriculture and horticulture and the mechanic arts: he acquires skill and handi-craft in the use of tools and implements, from the hammer or the hoe, to the scythe or the plough; he learns the construction and management of all such machinery as he may probably have the future use of. These practical exercises are learned simultaneously with his scientific instruction, in the lecture room, and the valuable mental habit is acquired of referring practices to their principles, and of watching and noting the facts and circumstances which in practice modify the application of purely scientific theories. The well informed mind, and the cunning right hand will learn to work together, and labour will be enlightened and dignified by its association with science.

As regards moral and intellectual culture and instruction, we propose nothing more, yet nothing less than the system which has approved itself to the wise and learned of many generations. The religious training is more especially the duty of the parent and the church. It begins at the mother's knee and its best and most effective lessons are learned before the period of College life.

With strict impartiality as to the various shades of Christian belief, the moral character shall here be guarded by vigilance and discipline from corrupting and immoral influences; and by diligent instruction be confirmed and strengthened in the great principles of faith and well living, which rise above all denominational differences and discussions.

In mental culture we adopt the course of studies of the most approved Institution for training and disciplining the intellect and cultivating the taste; embracing the study of languages spoken and unspoken; the mathematics in its several departments and applications; moral and intellectual philosophy; the physical sciences—those especially more immediately association with agriculture; also the science of government, political economy, and political ethics.

In connection with such studies, a patriotism which shall embrace his whole country, and a devotion to the Republican principles of the government will be faithfully instilled. Its teachings will rise above section and party: will know no difference of class, and acknowledge no personal superiority but what is due to worth and excellence of character.

The scheme of the Agricultural College, in connection with an Educational Institution such as is here sketched, embraces an experimental and model farm, with a plan for the advancement of Agricultural Science, based upon practice. Science in its applications to agriculture is in its infancy. Its promises and professions are many, but they are as yet unfulfilled. It proposes theories without number, which want the substantial basis of facts. It is proposed to institute here a system of experiments made under the most intelligent observation of facts, with an accurate and careful record of all the circumstances attending and bearing upon them. These experiments will be made in the full light of all that Science now professes to teach, but with absolute impartiality as to theories already in vogue, and the strictest reserve in adopting conclusions. Their design will be to contribute in some degree to building up an Agricultural Science on the sure foundation of well ascertained facts.

The farm, in its general management, it is proposed to make a model and an example of the best modes of culture in the several departments of Agriculture. It will be stocked with the best breeds of cattle, sheep, hogs, &c., and the most approved tools, implements and machines.

To complete the arrangements which a system so comprehensive demands, a commodious Workshop, with motive power sufficient for all its purposes, and with space enough for exercise and instruction in most of the Mechanic Arts, at least for those operating in wood, iron, and stone, is indispensable. The motive power we have in the abundant and rapid stream which passes through the farm. Will the means to erect the building and purchase the requisite machinery be denied us?

Such is a brief sketch, of the origin, progress, plan, objects and purposes of the Maryland Agricultural College. That it will commend itself to the wise and good, I confidently believe. That success will crown the cordial, united, energetic efforts of those, who have been intrusted with its management, I cannot doubt.

J. O. WHARTON, Register.

**HIGH PRESSURE FARMING—LIME vs. GUANO.**

The junior editor of the *Country Gentleman*, published at Albany, has been making a tour through Maryland, and furnishing for that Journal some interesting notes by the way, of prominent country places which he visited.

About the first mentioned is that of F. P. Blair, Esq., Montgomery co., in which our cotemporary falls into a very natural error, perhaps, of according to that gentleman a degree of credit which we think he would not himself claim, and which we are inclined to correct for the sake of keeping the record right on an interesting point in the history of agricultural improvement in Maryland. Mr. Blair is complimented for "the excellent agricultural example he has been for twelve years setting to the farmers of his neighbourhood." "The idea that rejuvenating the soil" it is said, "and rendering it susceptible of profitable culture, was a possible thing, appears to have originated with Mr. Blair." We think Mr. Blair is entitled to all the praise, and that is a good deal, of having followed a good example, and of making a wise use of his ample means in improving and adorning a country place. We claim for Maryland farmers of much longer standing, the credit of having originated and tested the idea of restoring the poverty stricken soils of his neighborhood. It was the fame of such improvements, probably, that attracted Mr. Blair to that country.

Just eleven years ago, Col. H. Capron, whose remarkable improvements on the line of the Baltimore and Washington Rail-road will be remembered, in a communication to the *American Farmer*, speaks in terms of high admiration of the spirited improvements which for years had been going on in the neighborhood of Sandy Spring.—He mentioned especially Mr. Caleb Stabler, Mr. Edward Stabler, Mr. Pierce, Tyson, the Brooks', Hallowell, Ellicott, and to these we might add many other names, who at that period, had for years been practising upon the idea of *rejuvenating* such soils, and had worked out marvellous results. He speaks of them all as working on the "high pressure" system, and spending money freely for lime, guano, bones, ashes, &c.

Of one of them he says, "Mr. Edward Stabler left the city in impaired health, with but one hundred dollars in his pocket, and located himself on a farm containing about sixty acres of poverty stricken fields; he has since extended his boundaries, and his farm now contains about 180 acres, all of which is in the highest state of improvement. I wish you could see his wheat. He has one field of ten acres that overtops the post and rail fence which surrounds it, by at least a foot, and will yield 35 to 40 bushels per acre."

Mr. Stabler in a letter written about that time, that is about 1847, speaks of his improvements as having been carried on through many years. They

were based upon the use of lime, and not only justified the comments of Col. Capron, in '47, but have proved very permanent in their character. In a letter received by us not long since from Mr. S. he says, "within the past 12 months, ending 1st of April last, I have sold about 60 tons of surplus Hay, all passing under the scales, and cut from 36 acres; about one third was the fourth successive crop of grass—and from about 27 acres of the same land, I cut as a second crop last season, about fifty bushels of clover seed."

"Previous to the application of lime, there was not on an average, a single field, on which I could, or did, cut one fourth of a ton of grass to the acre, now, off the same land, but much less in quantity than formerly, we annually cut from 1½ to 3½ tons to the acre."

Mr. Stabler is most emphatic as to the great value of lime as an improver whenever by experiment it may be found to act. And on this point he remarks in his letter to Col. Capron, "So far as my observation and limited experience extends, lime will improve all stiff clay soils; and if instead of plowing it under, it is applied to the surface one or two years in advance of the cultivation of the field, so that the winter's frosts and rains may act upon it, and dissolve it, the farmer will not have to wait seven or even five years, for a return. *Lime should be kept near the surface, and incorporated fully with the soil.*"

In his letter to us, Mr. Stabler says, "this was my preaching and my practice too: and it was freely followed until the Guano mania took hold of the farmers. Lime was laid on the shelf therefore; and radical improvement of the soil has since been very much stationary, if not retrograding, as far as to permanent improvement from the use of Guano alone. Such at least has been the result, so far as my experience and observation has extended."

We earnestly commend this last observation, coming from a man of Mr. Stabler's intelligence and interest in such matters, to the notice of our readers. He has not questioned the value of guano, or been without experience in its use. It is known on the contrary that he was among the earliest of those who acknowledged its wonderful effects, and in 1847 he says to Col. Capron, "can it be supposed that in liming to the extent we have, and using the highly concentrated and bought manures, such as guano, poudrette, bone dust and ashes, we do not find our account in it? We know, that by a judicious application of them all, the outlay and interest is repaid by the increased product, and the land improved thereby, much faster than without such aid!" But now after eleven years, he finds that guano has superseded the more permanent fertilizers, and improvement "if not retrograding is stationary."

We are very glad to have the countenance of



Mr. Stabler in bearing our own emphatic testimony to this point. We say without qualification, that the use of guano alone as it is generally used, does and will turn back the tide of substantial improvement. We do not say this as against the intrinsic value of guano. It is a powerful agent for good, and for evil. It is an agent for evil, with the great body of those who use it, because they use it imprudently and unwisely. They use it to force their poor lands into an extravagant production of crops, and every crop thus produced is an extraordinary drain upon its already impoverished resources. The process may be continued again and again, varying with the natural constitution of the soil, but every step is a step downward. If the quality of the soil, and the care and skill of the cultivator be such as to insure by the same application which increases the grain crop, a good sod of clover and other grasses, these will form exceptions to the general rule.—The formation of a well set turf must be the ground work of substantial improvement of the land, and the great value of lime as a permanent improver lies in this, that its especial effect is to insure a crop of grass. It refuses almost to act at all, until it has first laid this good foundation. The fault of guano is in the contrary direction. Instead of putting a man's money into his ground as a permanent investment to pay him back good and sure dividends, it makes a show of doing a smashing business, hands over his money to him (perhaps,) at next harvest, and leaves the land usually, minus all the elements of this large return, which the guano had brought into action.

The remedy is, not to reject the agency of guano but to use it for the production of clover, the grasses, and such crops as return more to the soil than they take away. Use it, not to make heavy selling crops, but to improve the land; and heavy crops will more certainly and permanently result from such improvement.

**HORSE TAMERS.**—We had intended something on the subject of horse tamers. Mr. Denton Offut, who is now in Baltimore, claims and as many think justly, to be the Author of the system of the Moral and Intellectual Philosophy of Horse flesh, of which Mr. Rarey has become so distinguished a practitioner abroad. Mr. Rarey, of Albany, it will be seen, advertises his Book.

**CLOTHING OF THE EARTH.**—The globe is a mass of vegetable life. Plants are the universal covering—the dress of the naked earth. They perform vast functions, reclaiming, extending, and improving it. They are the basis of animal life and existence; their very beauty, their social and benevolent language, render even this troubled scene a place of delight. He who communes and meditates among trees and flowers shall find his Maker there to teach his listening heart.

From the Valley Farmer.

### CLOVER SEED—GIANT CLOVER.

**EDITOR'S VALLEY FARMER:**—I owe you an apology for not answering, at an earlier day, your favor of the 2nd inst., in regard to the method practiced in this section, of cutting clover, threshing off the heads, and hulling and cleaning the seeds. I have only to say that my time has been so thoroughly occupied that I have found it impossible, until now, to comply with your request. Introductory to any remarks upon special inquiries, allow me to call your attention to the cultivation of a species of clover, in this section, which, from the most thorough inquiries I have been able to make, has been very sparingly introduced into other parts of the State, and in fact seems to be confined to some three or four counties in the interior, viz:—Washington, Marion, Lincoln and Boyle counties—a red clover, very superior to the kind in general cultivation, by no possibility a humbug, and if generally known, would doubtless be universally cultivated. It is called in this section, "Saplin, or Giant Clover," and was introduced into cultivation here, about the year 1848, by the Rev. John Sandusky and Eli Adams, practical farmers of Marion county. It was brought from Maryland.

The Saplin or Giant Clover is distinguished from the ordinary red clover by the size and height of its stalks, as they are as large again and grow from a foot to eighteen inches on an average, higher; it is of more rapid growth in the spring; will bear pasturing earlier, but does not bloom as early by three or four weeks, consequently better adapted to be cultivated with timothy. The seeds of the giant clover are smaller than the common, and it usually produces from two and a half to three bushels of seed per acre. I enclose you a small parcel of seed that you may make an experiment with it. The seed of this clover sells readily at from \$8 to \$10 per bushel, and is still selling this season at \$8, common clover seed at \$5 in this neighborhood.

I will now address myself to the matters of inquiry in your note. Our farmers usually pasture their clover until about the 10th of June, when stock is turned off, and the second or seed crop is allowed to grow. As soon as the seed is sufficiently mature it is cut down with the ordinary mowing scythe—a very light labor, two or three hands being able to cut, in good time, between fifty and a hundred acres; in fact, a distinguished farmer in Marion county, now dead—the late James C. McElroy—has been known to cut a hundred acres; in one season, with two hands, and these hands consisted of a negro woman and a half grown boy, and in that year he sold the seed thus saved for \$1000—seed being low.

The mode practiced in getting off the heads is as follows: A location is selected near the middle of the clover field, and a treading floor prepared in the usual way; (it won't do to work with it in barns, on account of the dust;) a team is then set at work, hauling in the straw to a treading yard, where one hand, a boy and two horses, get off the heads as fast as it can be hauled in; as the heads are thus separated, they are thrown up into a kind of sack in the middle of the floor, until the process is completed.

The next step after separating the heads from the straw, is to tread out the seed; and here, up to this time, has been with us the tug of war.—

All the horses that the treading yard will hold are brought into requisition—say from eight to ten, and in the hot sunshine, almost smothered in dust, the laborious farmer finds at the winding up; that he has succeeded in separating about five bushels of seed a day. A common wheat fan and meal sifter finishes the operation.

An experiment made this winter, however, with my "Ralston Thresher," bids fair to inaugurate a new mode of separating the seed from the hull. A neighbor of mine, Col. C. F. Bosley, of this county, had cut and reduced to this last process a large crop of clover, and despairing of success, in separating the seed from the hull by the treading floor, had made several unsuccessful attempts to buy a regular clover huller and cleaner. The winter season was on him and he was about to lose his whole crop of seed, when at my suggestion my thresher was tried; this we did by stopping the elevator and upper fan, and allowing the seed to escape at the chess spout. We set the horses to work; the clover hulls were in a very bad state, having been exposed to snow and rain, during the greater part of the winter, and yet by running them through the machine some two or three times, we cleaned about fifteen bushels a day; it was pronounced a perfect success by all who witnessed it, and the conclusion was arrived at, that we could easily clean, at the proper time of the year, 20 bushels per day. Whether this machine will answer to separate the hulls from the straw we don't as yet know. One thing is certain, however, its success in the most difficult, and in truth, only formidable part of the labor, has reduced the process of saving clover seed down to a matter of but little difficulty, compared to what it has been heretofore.

Recommending this subject to the attention of gentlemen of larger experience, and more ability to treat it, I close by submitting this hurriedly and imperfectly prepared article to your kind considerations.

Yours,

JAS. P. BARBOUR.

Springfield, Washington Co., Ky.

#### HOW TO MANURE TREES IN GRASS LAND.

Very few persons manure trees growing in sod or grass land, in a judicious or economical manner. The general practice is to dig the manure in, within a diameter of six feet, having the body for the centre. The tree takes its food from the young rootlets, whose mouths extend just as far on every side, as the branches of the trees; hence, this manure applied close to the body of the tree, is not where the roots take it up; and, of course, but little of its value is absorbed by the tree. If you doubt it, just try the experiment on two trees. Serve the one as above named, and the other, as follows, viz:—Mark a circle around the tree, having for its outline the exact radius formed by the overhanging branches; dig on the inner side of this circle a trench two feet wide, and one foot deep; mix well-rotted manure half and half with the best of the soil, or the earth dug out of the trench, and fill the trench with it; then replace the turf, and wheel away the refuse, or extra earth; rake clean and smooth; you will have a good growth of tree; your fruit large and more fair, and no unsightly or unnatural hillock or mound around the body of the tree.

#### ON THE IMPROVEMENT OF THE BREED OF HORSES.

A correspondent, in submitting to us an inquiry connected with the topic on which we have recently published a series of papers, has in fact pointed out an omission which we had made in that series, so that we are not only happy to reply to his question, but are glad that by preferring his request he has given us an opportunity of rendering the papers in question more complete and satisfactory. The point to which he has called our attention, and on which he desires our opinion, is the propriety of breeding from the Arab horse, several of which he suggests have been recently imported into the United States, and are now before the public.

It is an indisputable fact that all the excellence of the English and American thorough-bred horse is derived from Oriental blood of the desert, and originated, it is believed, in the admixture of the various breeds of the several countries to which the horse, in its purest and highest form, has from remote ages been indigenous. These countries are Arabia, Syria, Persia, Turkistan, the Barbary States, Nubia, and Abyssinia, all of which have races nearly connected with each other, but all possessing distinct characteristics. There would appear of these races to be in the English thorough-bred horse—with which the American is identical—a larger proportion of Barb than of pure Arabian blood. The celebrated Godolphin is generally considered by the most competent judges to have been a Barb. Fairfax's celebrated horse was a Barb; Greyhound was a Barb; the old Morocco mare was a Barb; the Royal mares imported by King Charles II., to which nine-tenths of our modern thorough-bred horses trace, were Tunisian or Tangier Barbs. The other most famous progenitors have been Turks, as the Byerly Turk, the Lyster or straddling Turk, the D'Arcy yellow Turk, Plaiice's white Turk, and many others.—The most noted of the pure Arabians was Darley Arabian. And it is, perhaps, the most considerable opinion that the great and unrivalled excellence of the English horse arises from the fact that he is the offspring of a judicious cross of all the best Oriental races, and not the produce of a system of close in-breeding.

It is worthy of remark, however, that although the fact is universally admitted that the whole original excellence of the English thorough blood is attributable to the blood of the desert, and although no horse is to be held as thorough-bred unless he can trace in both lines, paternal and maternal, to that blood, and although many horses of various Eastern and African breeds have been constantly imported both into England and America during the last two hundred years, no one of them has improved the breed of race-horses within the last century, or perhaps two centuries. So low at present does modern Arabian blood stand in the estimate of English turfmen, that a horse begotten by a Turkish, Arab, Barb or Persian stallion, on an English thorough-bred mare, receives, in the Goodwood Cup and other races in which allowances are given, 24 lbs. from all English-bred racers; and a horse begotten by such a stallion on a mare of any one of the same races, receives the enormous advantage of 48 lbs. The facts that even with this enormous advantage no horse so bred ever wins any plate or race of consideration, shows that the distaste to the blood is not a preju-

dice, but is founded on valid reasons. Why this should be so is not so clear. It appears, however, to be a certain and fixed rule of breeding that, in order to improve any race, the higher and pure blood must be on the sire's side, not on the dam's; and that he must be the superior animal. It is, we think, now an indisputable and undeniable fact that the English thorough-bred horse is in all respects, but especially in size, bone, power and beauty, a superior animal to any of the Oriental races, and consequently that his blood cannot be improved by any further admixture of that strain. Why this should be so cannot clearly be shown; but it arises probably from two causes: first, that as the Mohammedan race has degenerated in intellectual energy, in civilization and in power, the breed of horses used by that race has suffered a corresponding deterioration, owing to the want of intelligent breeding, of care, of management, and to the inferiority of their food, stabling and nurture; and, second, that the English and American descendants of the same horses, have, by the vast attention given to breeding them only from the best and most choice parents, to their more generous nutriment, better housing and clothing, and to the enlightened and scientific culture which they have long received, been improved in proportion to the deterioration of their ancestors.

No intelligent sportsman doubts that the English and American thorough-bred horse can beat the Oriental horse anywhere and everywhere, and in all respects. In Hindostan, at the European races, the whole-bred and even the half-bred English horses invariably beat the Indian Arabs; and very recently an English mare, named Fair Nell, disgracefully beat all the Egyptian Barbs of Ali Pasha, who had challenged the English Jockey Club to a trial match between English and Oriental horses for a prize of £10,000. The Jockey Club declined to take up the match collectively, because as a body they do not own race-horses, and individually, because the risk of ruining the best horses in a race of eight miles, which was proposed, over the rough and stony or sandy desert, was held rightly to be too great to justify the sending of animals of great value to a distant and barbarous country. The English residents of Alexandria and Cairo, however, excited by national spirit, and provoked by the triumphant tone of the Orientals, resolved to test the question. The Irish mare "Fair Nell" was selected, which was not a racer of any note or distinction, and about which there is now some dispute whether she is or is not actually thorough-bred, though she is known to be very highly and very well bred; and the result was that, vastly to the disgust and disappointment of the Egyptians, she defeated all the best Arabs of the Pasha's stud with perfect ease.

It has been asserted and is constantly urged by the favorers and defenders of Oriental blood, that no horses of really superior qualities or decided excellence, as Arabs or Barbs, have recently been imported; and that to this, and to no natural or general inferiority of the Arab or Oriental horse, is the want of success in breeding from him to be attributed; and, as a matter of course, every one who imports an Arab or Barb, asserts that his horse, and his only, is a real and superior-blooded animal. The plea is not, however, a valid one; for it is not likely, when a great majority of the horses imported from the East into both England and America have been gifts of Oriental

potentates to crowned heads or presidents, that no one of them should have been a valuable creature. Still less is it likely that obscure and comparatively unknown modern travellers should have succeeded in securing better blood than the lavish expenditures, and scientific knowledge of the richest of European individuals and the most enlightened and powerful of European governments. It is clearly the sounder opinion that the modern thorough-bred horse of Oriental origin is a superior creature to the modern Arab; and consequently it is clearly unwise to attempt to breed thorough-bred mares to Oriental stallions, or to breed any highly-bred mares to such stallions in preference to the best thorough-breds. Still it appears not improbable that the general trotting stock and country stock of America might be improved by crossing with good Arabian and Barb blood, where the "best thorough-bred, combined with the fine form and power, is not to be attained. We are even impressed with the idea, that with some half-blooded breeds, such as the Canadians and Normans, both of which have a large, although a very remote cross of the African Barbs of Andalusian breed, a recurrence to the original, undiluted Barb or Arabian blood might be preferable even to breeding from modern thorough-breds, on the principle, before referred to, of having, after many years or centuries of out-crossing, recourse to the original strain of blood, which is often found to *niek*, as it is technically termed, when it succeeds highly.

It is worthy of remark that some distinguished trotting-horses trace to Black Bashaw, who was a pure Barb of Tripoli, and who is said to be a horse of great beauty and power. The Canadians and Normans both show far more similitude of structure and form to the Arabs and Barbs than do the modern thorough-bred horses; and that is a strong reason for believing that such a cross might prove successful. Half-bred horses between the Indian Arab and English half-bred mares, have been found to answer admirably for cavalry horses, and are used for that purpose exclusively in the Anglo Indian service. The 10th Hussars, mounted on animals of this stamp, attracted great attention in the Crimea, where these horses were found to be hardier and more enduring of privation and exposure to weather than the English horses of two or three thorough crosses, although inferior to them in speed, in length of stride, and in weight in the shock of battle. The same remark applies to the half-bred Algerine Barbs, ridden by the French *Chasseurs d'Afriques* and *Chasseurs Indigenes*, most of which, it is said, are bred from mares of Normandy or Picardy, and this would encourage the hope of success in breeding from Normans and Canadians to horses of Oriental blood. We should like to hear of the experiment being tried, and, although we should not care to predict perfect success, we should rather anticipate a good than an evil result; we would, however, on no account put a thorough-bred mare to any Eastern horse, nor any very highly bred mare, where a thorough-bred stallion is within reach. Of course, the boniest, most compact and strongest Arabs should be selected; an Arab *weed* of inferior strain is a very poor creature for any purpose, and worst of all from which to breed. From what we have heard, of the Nolan Arab, and from the consummate knowledge in horse-flesh of his gallant owner, we should augur as well of him as of any recent importation

from the East. We should not be surprised if, in future days, material improvement in the horse-flesh of the West, where there has been, until very recently a great want of thorough blood, may be traced to that horse.

We have thus answered, to the best of our judgment, the question of our correspondent, and shall be happy at any time to give any information we may possess on this interesting and important subject, which we rejoice to see is now attracting much attention throughout the country.—*New York Tribune.*

#### USE OF WATER IN VEGETATION.

In Hovey's Magazine for June is a valuable article on the use of water from which we have a few paragraphs:—

While we follow so implicitly many of the directions of English cultivators, we fail in one of them, viz: the application of water. Why this is so we are unable to say. We rarely water garden crops of any kind; occasionally we look after some favorite plant, and see that it is duly supplied with this element till well established, when it is left to itself,—but no systematic attempt is made here, as in Britain, to water whole crops of either fruit or vegetables.

Marshall, an old and experienced author, remarks "that strawberries and cauliflowers should generally be watered in a dry season; strawberries more particularly when in bloom, in order to set the fruit—and the cauliflowers when they show fruit, in order to swell the head; in a light soil this ought never to be omitted. In very dry weather, seedlings, asparagus, early turnips, carrots, radishes and small salads, will need an evening watering." He adds, "Water to the bottom and extent of the roots as much as may be. The wetting only the surface of the ground is of little use, and of some harm, as it binds the earth, and so prevents showers, dews, air and sun from entering the soil, and benefiting the roots as they otherwise would do. The ground about plants which are frequently watered should be occasionally stirred and raked. Many things are impatient of being kept wet about the stalks, and therefore watering such plants should be generally at a little distance." He recommends "Watering the root of wall trees in dry weather effectually; watering wall trees with an engine in the evening refreshes them much, and helps to rid the trees and wall of insects and filth."

"Water," says Loudon, "is essential to a good crop of strawberries in dry weather, and may be performed on a large scale by means of a barrel fitted in a proper manner, or, on ordinary occasions, by a common watering pot. Some amateurs grow their plants in beds having small open-built channels as alleys, and then, the beds being formed on a perfect level, by filling the alleys with water, it penetrates the soil of the beds on each side."

*Hollyhocks.*—"If dry weather sets in," says Turner, "keep them well watered after mulching." "Continue," he again says, "to water dahlias over the foliage every evening during dry weather, and practice a good root watering once a week, according to the weather."—"Phloxes," says one of the best cultivators of this fine flower, "should receive a good watering once a week."

If all this is required in the climate of that country, how much more need that it should be resort-

ed to in our own, where evaporation is carried on with double the rapidity that it is in that cool, drizzly and humid isle?

A sprinkling of water is oftentimes attempted with real injury, for the top soil is kept damp, which deceives all but the skillful cultivator; and hence the bottom roots are always dry, while the surface roots are constantly soaked. The effect of this kind of watering, which is quite too general, is, that the roots at the bottom are dried up, and those at the top rotted off. When water is given it should be in sufficient quantity to thoroughly moisten every particle of soil.

Our finest fruits are oftentimes a failure, from the want of a liberal supply of water; the cracking and splitting of our large and fine varieties arises, as we have before frequently stated, from the absence of a proper degree of moisture. If the soil is not naturally deep, so that the roots can penetrate and find the moisture which they need, this deficiency must be supplied, or the fruits will not attain their full size. It is useless to expect any other result. Not only should it be supplied at the roots, but, if possible over the foliage and fruit. The crop of strawberries would be, undoubtedly, in many instances, doubled by half a dozen liberal waterings. The roots lie near the surface of the ground, and when this is exhausted by long continued dry weather, how shall the plants receive their nourishment if not by artificial aid.

We wonder at the size of the large strawberries which are occasionally seen at the London exhibitions, but if we knew the pains which were taken to produce them, they would cease to be wonders. The wonder rather is, how we raise such large strawberries in our climate, where often, during the entire ripening of a crop, not sufficient rain falls to moisten the earth to the depth of an inch.

Vegetables of many sorts, particularly lettuces, cauliflowers, &c., can only be grown to perfection with the aid of liberal waterings. To have them large, tender, and succulent, they must not be cut off from a constant, steady supply of water; and, when the rains do not supply this, it must be done by artificial aid. It only needs a trial of those raised with proper attention to moisture, with such as are produced without it, to decide which are the best. Every garden, should, therefore, have the means of commanding a ready supply of water. It cannot be considered complete without it.

**PRIVATE PRAYER.**—"Philosophy," said the good and great Richard Watson, "asks a reason for the offering of prayer, and, waiting for answer never prays at all. Religion hears that God will be inquired of by all, thankfully bends the knee, touches the golden sceptre, and bears away the blessing." An apology for prayer is neither needed or attempted here, as we write for those who admit its adaptation to man's utter dependency, and perhaps who pray themselves. We ask no other reason for calling upon the name of the Lord than the single command of our great Prophet:—"But thou, when thou prayest, enter into thy closet, and when thou hast shut the door, pray to thy Father which is in secret; and thy Father which seeth in secret, shall reward thee openly." This is our authority, our argument, for private prayer, sitting, as it does like a jewel on the bosom of that all-perfect book of divinity, the Sermon on the Mount.



[From the New England Farmer.]

**THE RHINE-VINE CULTURE.***Letter from Mr. French.*

HEIDELBERG ON THE RHINE, }

August 2, 1857.

MY DEAR BROWN:—My last letter left us at Coblenz by the famous monument of Russian good humor. We left Coblenz on the last day of July, and came up the Rhine through the most beautiful portion of the most beautiful river. The hills, as we leave Coblenz, shut in upon the river before and behind us, and, as we stand on the deck and look forward or backward, it seems as if we were on some small lake like those of New Hampshire, bounded on all sides by precipitous banks. The river is winding enough to make you wonder how the boat is to get on, in its course.

The old castles, perched on the rockiest crags, are increasing in number. The grape terraces go up one above another to nearly a thousand feet in height, giving a landscape rich and quite peculiar to this land of vineyards. Two scenes in my own far-off father-land kept continually coming back to my mind. Though distant and far different from each other, I was reminded of both at every point. One is in my native New Hampshire, as you go from Conway towards the notch of the White Mountains, where the road, not far from the Willey House, winds among the steep dark shadowy hills that seem to shut you in on all sides, and bar your progress in all directions. The Rhine seemed that highway; and the wild hills on her banks seemed the mountains of the Granite State. Again the scene would change; and as we sat under the awning in the warm, quiet day, I seemed to be on the Hudson, up by the Palisades, with a party of pleasant friends on our way to Albany. And so the Rhine, on a smaller scale, but in a more comprehensible form, because it brought its details of scenery nearer, combined, to my fancy, the beauties of the two most beautiful scenes which my eyes have ever beheld in my own country, and to them added the peculiar features of a wine country. To all this the "Father of Waters" adds the charm of association with the poetry and romance of such as Southey and Byron and Longfellow and Mrs. Norton.

"More mighty spots may rise—more glaring shine,  
But none unite in one attaching maze  
The brilliant, fair and soft—the glorious of old days.  
The negligently grand, the fruitful bloom  
Of coming ripeness, the white city's sheen,  
The rolling stream, the precipice's gloom,  
The forest's growth, the Gothic walls between,  
The wild rocks shaped as they had turrets been,  
In mockery of man's art."

Even with Byron's aid, I feel how vain is the attempt to convey any adequate impression of the peculiar beauty of this part of the Rhine; but we will hasten on to Bingen, where we arrived at four P. M., and where under the shade of the lindens I wrote you a letter, vainly hoping when I commenced it to describe my journey up the Rhine to Bingen in a single epistle.

The beautiful lines of Mrs. Norton have hallowed the name of Bingen to my mind. I will send them some day to the *Farmer* for publication in the literary department. They commence—

"A soldier of the Legion lay dying at Algiers,  
There was lack of woman's nursing, there was dearth of  
woman's tears;  
The dying soldier faltered as he took his comrade's hand,  
And he said 'I never more shall see my own, my native  
land,'  
Take a message and a token to some distant friends of mine,  
For I was born at Bingen, dear Bingen on the Rhine."

At this place the river makes a considerable bend, and the hills come down into it so abruptly as to narrow its course and increase its current almost into rapids. Here are some of the mills for grinding wheat, which are observed all along the Rhine. They are constructed on large boats anchored in the midst of the stream. Large wheels projecting from the sides are slowly turned by the natural current of the river, carrying shafts to which is geared the machinery which turns the stones. At one or two places we observed a dozen or more of these corn-mills anchored side by side, in a line across the Rhine. The motion of the wheels, slow and lazy, corresponds well with the habits of the people, and with the leisure and dignity of us wanderers, who frequent these pleasant waters, where, whatever be our go-ahead propensities, we can move no faster than German steamers and diligences choose to carry us.

Taking a small row-boat, we crossed the Rhine, and made the ascent of a mountain on the other side called the *Neiderwald*, of which I will give a brief account, as it may throw light upon the character and productions of the soil, as well as upon the habits of the people. The moment we landed, we were met by a dozen men, boys and girls, who proffered us all manner of aid as guides, with horses and donkeys enough for a regiment. Our party consisted of nine persons, five of whom concluded to take each an animal, while the rest of us proposed to walk.

Two Englishmen and one lady and one Canadian took horses, while another gentleman preferred a donkey. Here, as everywhere else in this country, it is usual for each animal to be attended by a man or boy. You can always have a man and mule or horse at the same price as the beast without the man. In these countries where labor is cheap and people plentiful, it is considered a privilege by those persons who have charge of the animals, to keep along with the traveler, trusting to their wits to get enough out of him to support them at least for the time. The man who rode the donkey was a picture rare to see, and we all regretted that we could not bring home his daguerreotype. He was evidently out as a tourist from the middle of London. He wore, for exteriors, an overcoat with large sleeves turned up with red silk about a foot in width, a high-crowned, stiff, narrow-brimmed hat, an opera-glass suspended by a strap across his shoulder, and a small leather bag filled with maps and guide-books, across the other shoulder. He carried an umbrella, and sat on the smallest kind of a donkey, his feet nearly touching the ground, while a girl about fourteen, bare-footed and bare-headed, followed the donkey, constantly beating the poor creature with a stick, and talking to him in unknown tongues. She was the only female driver in the party, and she ran along the whole distance, some five or six miles, showing no signs of fatigue. We were met on top of the hill by women and girls, who at various places offered us cherries, pears, apricots, apples and mulberries, of very good quality, of which we were glad to partake.

Both in a cending and descending, we passed through the vineyards, upon which, from the steamer, we had looked with so much interest. I got over the fences, and walked a long distance among the vines to observe carefully the mode of culture. Each vine is tied to a single stake three or four feet high and the vines are planted at about four feet distance, like our Indian corn in rows and hills. The

vine is annually cut down nearly to the ground, a few spurs being left, and the fruit grows in a few clusters, very low and close together. On the outside of each enclosure, frequently is a trellis, on which the vines are allowed to run at greater length, forming a sort of border to the field.

On the top of the Neiderwald is a natural heavy forest growth, mostly of oak and beech, just like a hard wood forest in New England, on good land free from stones, the first natural forest I have seen since I crossed the ocean. From the top of the hill, we had a fine view of the level country south of Bingen, a fertile region covered in great part with fields of wheat nearly ripe. On the Rhine below, we watched the huge rafts of timber, with small houses on them, slowly moving with the current down towards Cologne, and perhaps to Amsterdam, and thence across the ocean. We saw also boats loaded with cattle for the markets, and occasionally a small steamer towing a fleet of gondolas, up against the strong current.

On the whole, Father Rhine is a useful institution, as well as an ornamental, and no wonder the children of his shores have attached the paternal appellation to him.

Here again I saw oxen, single or in pairs, working by the horns, and sometimes also a single cow drawing a market-cart through the streets. All their agricultural implements and arrangements are extremely rude and simple, indicating a low state of education and a low standard of comfort.

From Bingen, we again took a boat up the river to Mannheim. Above Bingen, the river becomes less rapid, the hills sink to a lower level, and recede from the banks, and through much of the distance the country adjacent appears flat, but fertile. Still there is great beauty on this part of the Rhine, in the fine estates here and there, the occasional hills rich with vineyards, and the classical storks standing motionless on the islands of sand. The rougher features of the days before gave place to a softer landscape, and as the bright sun hung near the horizon in setting, he threw a rich crimson hue on the river behind us, while the moon in her full glory shed silver light on our pathway forward, forming a rare scene of beauty on the placid water. Between Bingen and Mannheim we passed the city of Worms, in sight of the old cathedral where Luther posted his defiance.

Spending a night at Mannheim, we came on to Heidelberg, about twelve miles, over a railway owned by the Duke of Baden, and said to be the best in Europe. We passed over a finely cultivated plain, on which are large fields of hops, and of beets for sugar, a few patches of Indian corn and some fields of tobacco of a few acres each, the first corn or tobacco I have observed in Europe. The highways here are not fenced, but are marked out by fruit or ornamental trees planted at regular distances. Large barns are connected here with the farm houses, capable of containing all the crops, so that the system of stacking hay and grain which is universal in England is probably not practised in this region. And here at Heidelberg, we have passed the Sabbath, attending an English church. This is a city famous for its five hundred students of law and divinity, famous for their duels and beer drinking, famous for its wonderful old castle on the rock and the celebrated "tun of Heidelberg," the largest wine cask in the world, capable of holding six hundred hogheads. The city is known to fame by its thousand legends, of the Black Forest which

lies behind it, and of ghosts and goblins which frequent German Universities, and are produced in history by German students.

We found several young Americans here, students in the University, who gave me a cordial greeting, and to whom I am indebted for as much attention as it was possible for them to show to one of their countrymen.

I may say here that the Englishmen with whom I travelled through the continent were struck with surprise at the brotherly feeling manifested towards me by every American we met. Englishmen passed each other, in a strange land like priests and Levites, but in Americans from North or South, West or East, I met always friends and brethren, and together we thanked Heaven that we had so goodly a heritage.

Your friend, H. F. FRENCH.

### DEEP TILLAGE—GOOD PRODUCTS.

Mrs. Swisshelm, is responsible for the following:

We wot of a man who has about two acres of ground. He had lately come into possession, and had a farming fever. Through all last summer's drouth he looked and prayed for rain, and hoed and plowed to be ready for it. The rain did not come, but the plowing and hoeing went on, not with any definite idea of benefit from that, if the drouth continued, but to be ready for the rain.—Well, he had two of the largest porkers we have seen, which all summer had been fed on weeds, house swill, spoiled cheese, &c. He had, off his two acres, as much corn as fattened them to the finest possible condition, plenty of corn fodder for two cows through the winter, and expects to sell a ton of hay in the spring—price at present, from twenty-four to thirty dollars; and has, of the finest potatoes we have seen, an abundance to do a family of seven persons until new potatoes come, besides seed for next year and probably some to sell. Then, there were pumpkins which he was feeding to cows and pigs until winter set in, and for summer use they had beets, cabbage, tomatoes, onions, salad, &c. He counts that the products would more than pay the interest on the purchase money, counting it at four hundred dollars per acre, and what he paid for plowing, leaving him all the fun of hoeing for clear profit.

### THE WILL OF GOD.

I often think that the real value of whatever we do is proportioned to the conformity with which we do it to the will of God. If in merely eating or drinking, I do it because it is the will of God that I should, I am doing what is more agreeable to him than if I were to do what should even cost me my life, without any such Divine intention.—I would advise you often, during the day, beseech God that he would inspire you with a real love of your vocation, and that you should say, like St. Paul, when he was converted, "Lord what wilt thou have me to do? Wouldst thou that I should serve thee in the lowest office in thy house? I will reckon myself here, too, blest. Provided I serve thee, I care not in what capacity." And coming more particularly to what is vexing you, say "Wouldst thou that I should do such and such a thing? Alas! O Lord, though I am not worthy, willingly will I do it."—*St. Francis de Sales.*

## THE FARM AS A WORK OF ART.

As a work of art, I know few things more pleasing to the eye, or more capable of affording scope and gratification to a taste for the beautiful, than a well-situated, well-cultivated farm. The man of refinement will hang with never-wearied gaze on a landscape by Claude or Salvator; the price of a section of the most fertile land in the West would not purchase a few square feet of the canvass on which these great artists have depicted a rural scene. But nature has forms and proportions beyond the painter's skill; her divine pencil touches the landscape with living lights and shadows, never mingled on his pallet. What is there on earth which can more entirely charm the eye, or gratify the taste, than a noble farm? It stands upon a southern slope, gradually rising with variegated ascent from the plain, sheltered from the northwestern winds by woody heights, broken here and there with moss-covered boulders, which impart variety and strength to the outline. The native forest has been cleared from the greater part of the farm, but a suitable portion, carefully tended, remains in wood for economical purposes, and to give a picturesque effect to the landscape. The eye ranges round three-fourths of the horizon over a fertile expanse, bright with the cheerful waters of a rippling stream, a generous river, or a gleaming lake,—dotted with hamlets, each with its modest spire; and, if the farm lies in the vicinity of the coast, a distant glimpse from the high grounds, of the mysterious, everlasting sea, completes the prospect. It is situated off the high road, but near enough to the village to be easily accessible to the church, the school-house, the post-office, the railroad, a sociable neighbor, or a travelling friend. It consists in due proportion of pasture and tillage, meadow and woodland, field and garden. A substantial dwelling, with everything for comfort and nothing for ambition,—with the fitting appendages of stable, and barn, and corn-barn, and other farm buildings, not forgetting a spring-house with a living fountain of water,—occupies, upon a gravelly knoll, a position well chosen to command the whole estate.

A few acres on the front, and on the sides of the dwelling set apart to gratify the eye with the choicer forms of rural beauty, are adorned with a stately avenue, with noble, solitary trees with graceful clumps, shady walks, a velvet lawn, a brook murmuring over a pebbly bed; here and there a grand rock, whose cool shadow at sunset streams across the field; all displaying, in the real loveliness of nature, the original of those landscapes of which art in its perfection strives to give us the counterfeit presentment. Animals of select breed, such as Paul Potter, and Morland, and Landseer, and Rosa Bonheur never painted, roam the pastures, or fill the hurdles and the stalls; the plow walks in rustic majesty across the plain, and opens the genial bosom of the earth to the sun and air; nature's holy sacrament of seed-time is solemnized beneath the vaulted cathedral sky; silent dews and gentle showers, and kindly sunshine, shed their sweet influence on the teeming soil; springing verdure clothes the plain; golden wavelets, driven by the west wind, run over the joyous wheat field; the tall maize flaunts in her crispy leaves and nodding tassels;—while we labor and while we rest, while we wake and while we sleep, God's chemistry, which we cannot see, goes on beneath the clouds; myriads and

myriads of vital cells ferment with elemental life; germ and stalk, and leaf and flower, and silk and tassel, and grain and fruit, grow up from the common earth;—the mowing machine, and the reaper—mute rivals of human industry—perform their gladsome task; the well-piled wagon brings home the ripened treasures of the year; the bow of promise fulfilled spans the foreground of the picture, and the gracious covenant is redeemed, that while the earth remaineth summer and winter, and heat and cold, and day and night, and seed-time and harvest, shall not fail.—*Ed. Everett.*

## GARDENING AND FLOWERS.

The Newburyport Herald gives the following excellent advice on a much-neglected subject.—If our countrywomen could be induced to reflect upon the subject of horticulture with half the sagacity they employ in topics of house-hold concerns, they would require no persuasion to cultivate this most refining and beautiful of occupations, which, akin to poetry, is its own sweet reward:—

"Gardening was the first employment of man, and now it is the most agreeable and healthy.—Anciently it was esteemed the second of the fine arts, ranking next to architecture. Now, it should be the second thought of every family: the home that shelters, first, the garden for pleasure, and profit next. It is a favorite occupation for a leisure hour to every man, giving to those who have a taste for the beautiful and the valuable, delight with gain; and it should be a favorite occupation for every woman, who should have her plants and flowers and shrubs, giving her employment in the open air for an hour or two every day. Our American women grow old and die before their time, for want of out-door exercise, which can be better afforded in the garden than elsewhere. It is a pity they could not learn something of their English cousins in this matter. The increasing interest taken in horticultural matters, as witnessed in the exhibitions, is a hopeful sign in the community. The gardens of the wealthy, filled with choice fruits and beautiful flowers, and the nurseries and vegetables of those who make gardening a business, have greatly improved the last ten years; but where land is so plenty and attached to nearly every dwelling, there are advantages and profits and pleasures in a garden that the poorest may enjoy with the wealthy, the laborer with the man of leisure. Train the vines upon the sunny side of your houses, dig up the little patches by your doors, rear the trees, and grow the vegetables, and nurse the flowers. Their fragrance will be at your windows, the birds will come and sing for you, the melon, the plum, the pear, the apple will be in their season; and how delightful, morning and evening, the wife and children and friends, to mark the growth of vegetation, which may be gathered in the fall for support in winter!"

✍ We have received from A. O. Moore, Agricultural Book Publisher, New York, a new Manual of Pear Culture, by Thomas W. Field, professing to answer for the reader, the questions: "What kinds of Pear trees can I plant most profitably? and how shall I treat them, to insure a return of the investment?" It is an interesting topic, but we have not yet been able to examine the manner in which the author treats it.

## THE PERFECT FARMER.

We have been greatly interested in the address of Hon. Joseph R. Williams, President of the Agricultural College of Michigan, delivered on the occasion of receiving the charge of that Institution. It abounds in arguments for the proper education of youth in reference to the pursuit of agriculture.—The following extract furnishes an illustration of what is necessary to constitute "the most accomplished farmer":

"The idea that perfect farming consists only in aptness at labor and strength of muscle, is at war with true philosophy. The sailor before the mast splices a rope, steers the ship, or rows a boat with perfect skill. Hurled into the ocean, he rides the waves with composure, and is saved in countless exigencies, where a landsman would surely have perished. Tossed fearfully on the yard arm, amid the play of the lightnings, and sleet, and the tempest, he reefs the sails with imperturbed coolness. Is he a perfect sailor? Oh no! Silent, thoughtful students are at work in the National Observatories at London and Washington, preparing the Nautical Almanac. Maps and Charts indicating the shoals and reefs and coasts, are prepared for him at great expense and care. Prof. Maury has published his Directions for taking advantage of the winds and currents. By all the aids and appliances which science has furnished, the mariner can indicate upon the trackless ocean, almost the precise spot he occupies, and sleep with composure and confidence.—But is it the profound scholar, from whose deductions the ship is worked, the perfect sailor? Oh no! But the man who unites the highest practical aptness and skill in working the ship, with the scientific comprehension that enables him to use all the deductions of Nautical Science, he is the most perfect sailor. He may be found among the officers of the ship. The most perfect union of principles and practice constitute the sailor. What is the moral? Why, that in Agriculture, the most abundant knowledge of all known natural laws, and all applicable scientific principles, must conspire with the most perfect skill, aided by energy, industry, economy, temperance and health, to make the most accomplished farmer."

## THE WAR ON BIRDS.

I am pleased to see public attention drawn to the subject of protecting birds. Of late years the ornamental trees in our parks and streets have been denuded of their foliage almost as soon as the leaves unfold themselves, and instead of being beautiful objects in nature they are positive nuisances. Why is this so? Trees are not similarly affected in the country. I answer, it is because we destroy and persecute the birds. Observe that little wren, how cunningly she peeps and peers into the expanding leaves and flowers, hopping from twig to twig.—She is in pursuit of those fell destroyers; her quick eye penetrates their retreat; she sees them, drags them from their lair, and in an instant puts them beyond the power of doing further mischief. Excellent economists, well worthy of our protecting care!

To save my roses, I am obliged to perform the service so much better and effectually performed by them. A little wren came last week and assisted for a short time, but I observed in the next lot a boy with a trap-cage, and my assistant has left the garden. I don't know that he has been taken prisoner, but, what with stones and traps, the birds

stand a poor chance. Let a stop be put to this persecution; make it a penal offence to kill or catch birds, and, in order to encourage domestic relations, put up wren boxes in your gardens. They will quickly be tenanted; they love the society of man, and to be tenderly cared for. Encourage their presence by kindness; they will work for you in return; forbid your children stoning them, and advise other people's children to the same purpose.

The people of no other country in the world are so barbarous and cruel in their warfare upon birds, as the people of this. The little sparrows are found in great numbers in every village and city in Europe; no one ever disturbs them, and among the Turks so tame are even sea-birds that they will scarcely move from the prow of the light caique; and shall we

Which Heaven hath forbid the Ottomites?"  
—N. Y. Evening Post.

## DAIRY HUSBANDRY.

HOW MUCH MILK FOR A POUND OF BUTTER?

The Albany Country Gentleman has an article on this subject which may excite surprise in the minds of some farmers in New England. The editor professes to have made extensive inquiry of the farmers in regard to the quantity of milk required to make a pound of butter.

And he finds the answer to agree very nearly with each other, viz.: that on an average through the season, it requires *fourteen quarts* of milk to make one pound of butter!

This is going a little beyond any statement we have yet seen—whether from guessing, weighing, or measuring. Most of the farmers in Massachusetts with whom we have had any conversation on this subject, state that ten quarts, on the average, yield a pound of butter.

But the Country Gentleman farther states that "The milk of the Alderney cow will give much more butter from a given quantity of milk, than any other breed with which we are familiar."

Now we cannot, with any propriety, controvert this statement, because we know not how familiar the editor has been with the various breeds of cattle in years past. He may possibly have heard of *Devon cows* that have produced a pound of butter from *four quarts* of milk—and he must have heard of the premium offered to any farmer who will bring an Alderney cow to equal this.

He must have heard also of the *Cream Pot* breed of Col. Jaques, of Charlestown. The Col. states that *four quarts* of milk, from this breed, have produced a pound of butter for him.

But think of *fourteen quarts* for a pound of butter! Why, we would sell such milk at once for one cent a quart rather than store it, and skim it, and churn it, and lump it up for the market. Can milk be bought in New York from the farmer at one cent a quart?—*Massachusetts Ploughman.*

## SALT AS A MANURE.

We look upon John Johnston of Geneva, N. Y., as one of the best farmers in this country; whose success in business is beyond dispute; one of the earliest advocates of under draining; one who has demonstrated its profitableness so fully that he has proved that no farmer can afford to do without it; and he has also proved that several other things that farmers generally neglect to use for fertilizers would pay them better than any ten per cent stock in which they are prone to invest their surplus



money. One of these things which is within reach, as to expense, of the great mass of American farmers is salt—common salt (chloride of sodium)—a most valuable fertilizer. Hear what he says of it, under date of May, 1858:

"I prefer sowing wheat from the 10th to the 20th of September, but cannot tell how much high manuring will hasten its ripening. Very high manuring will retard the ripening, but the application of 280 to 300 lbs. of salt will hasten the maturing at least four days, beside giving a brighter straw, more plump grain, and finer sample every way, and I think that 400 lbs. per acre might pay still better. I use much salt, and think it prevents in a great measure rust or mildew. I sowed fourteen acres of wheat last September; it now surpasses any I have seen, and is much superior to eleven acres in the same field on which no salt was sown, both being sown on the same day, and fallowed in the same manner. I have no doubt it will mature at least four days previous to the eleven acres, and those four days may put it out of danger from the midge. I get better results from salt when dry weather prevails for some time after it is sown, and I sometimes sow 75 barrels in one season, buying it at wholesale at the manufactory. I generally sow it immediately after the wheat is sown, but if I was to be guided by theory I would say sow it before and harrow in with the wheat. I have often thought about trying it in this manner, but have not done so."

If farmers need any more evidence of the value of salt as a fertilizer, we must say they are very skeptical.

**SALT AND ASHES FOR COWS.**—It is well known that cattle, when first turned out to pasture in the spring, are apt to "scour," as it is called. A correspondent of the Germantown Telegraph, says, that when he turns his cows to pasture, he "provides several small tubs, and having fixed them firmly in the soil to prevent them being overturned; puts into each tub one quart of salt and three quarts of sifted wood-ashes, previously well mixed by stirring. The cows partake freely of this mixture. It prevents injury from the sudden change from dry to green food, and has, besides, a most invigorating effect upon the general system. Some assert that salt should be given only as often as once a week, as its more frequent use would be injurious. But when supplied in this way, no apprehension need be entertained. I have never known an instance of the kind, and I have so given the article for years."

#### WEANING CALVES.

The best mode of weaning is to keep the calves in the barn on hay. And whether they are permitted to suck the cow three days or three months, they should not be turned out to grass, provided you can procure good hay. Calves will readily eat good fine hay when they are two or three weeks old, but they will not then eat grass enough to keep a grasshopper alive.

We often see young calves tethered out in gardens and on headlands where the richest clover grows—yet they always seem pining for something to eat. And when they have slops given them and all manner of stuffing they look poor and emaciated.

One reason is, the flies pester them exceedingly when out in the open day light, but in a barn properly closed the flies are seldom seen.

It costs less on most farms to feed on hay in the barn than to furnish a pasture for young calves—and now at this time the new grass may be mown and dried for them. A little oat meal may be given them daily at less cost than to carry the same out to the field—and we save all the manure.

#### Physiological Fact Interesting to Sheep Breeders.

Mr. Malingie Noule, President of the Agricultural Society of Loire et Cher, reports as follows:

"In putting my small mixed-blood ewes, that weighed not above fifty-six pounds, to heavy New-Kent rams which weighed often two hundred and twenty-five pounds, one apprehension alarmed me—the fear, I mean, of losing ewes which had cost so much trouble, when the time came for their giving birth to the large offspring one naturally expected. But no such danger arose; and the reason seems to me clear. Whatever be the size of the ram, the germ develops itself only in proportion to the nourishment it receives. Now, while it remains in the womb of the female ewe, it obtains but little support; consequently the lambs remained small, and the births took place without difficulty. In two thousand labors we had but one death that was occasioned by the immoderate size of the lamb. It was curious to see such small offspring engendered by such huge sires. But these little creatures, if well fed, soon began to grow rapidly, and it is not uncommon to see ewes suckled by lambs larger than themselves."

**THE ARTIFICIAL MANURE QUESTION.**—At a meeting of the Oxford Farmer's Club, on Wednesday, Jan. 14, the following resolution, proposed by Mr. Mein, and seconded by Mr. Cloggins, was carried unanimously: "that this Club considers the use of artificial manure as still too much limited; that Peruvian guano, as standard, is the best top-dressing for corn crops; firm-yard manure, guano, nitrate of soda, and bone dust for grass land; that mixed manures are the best for root crops; and that without a liberal use of artificial manure the present extent of land in this country could not be kept in cultivation, as there is nothing that has tended more to assist high farming than the introduction of artificial manure; and, finally that this Club does not consider that the decay of the root crop is attributable to the lavish application of manures." At the same meeting, Mr. Thomson, of Culham, was re-elected Chairman of the Club for the ensuing year.—*Farmer's (Eng.) Magazine.*

**INSECTS.**—Professor Asa Fitch says, in his new contributions to the Transactions in the New York Agricultural Society, "I sometimes think there is no kind of mischief going on in the world of nature around us, but that some insect is at the bottom of it. Certain it is that these little creatures, seemingly so insignificant and powerless as to be unworthy of a moment's notice from anybody but the curious, occupy a most important rank in the scale of creation, and on every side of us their performances are producing most important results, tending probably in an equal degree to our benefit in one direction, as to our detriment in another." It is impossible to over-estimate the value of these contributions to science, when we reflect that it is computed that all the species of insects taken together which exist in nature, do not fall short of four hundred thousand!

**SOILING vs. PASTURING.**

Soiling, or the practice of cutting green fodder and supplying it to cows, cattle, &c., in summer, in distinction from the more common practice of pasturing them, is probably neglected more than it should be, and more, also, than it would be, if its advantages and conveniences were more justly and generally considered. When the question comes up before the farmer's mind—shall I pasture all my cows, cattle, and horses, or shall I take some of the land that would be needed if I pastured, and raise thereon larger crops of grain or some marketable crop, which I could do if I adopted the practice of soiling them?—when the choice between pasturing or soiling presents itself in such a form as the above, or in some other forms, which will readily occur to our readers without our occupying time and space in specifying them, then the first thing usually thought of is the expense, trouble, or other inconvenience or disadvantage of soiling. These *very promptly* suggest themselves—much more than the counterbalancing advantages—and unless some effort has been made to find out the latter, or unless they have been made evident and brought strikingly under observation by the manifest success of some neighbor or friend who has practiced soiling for some time, the former will obtain more weight in the decision than they may be justly entitled to.

If the other side of the choice—viz: the advantages of soiling—were as readily thought of or as palpably manifest, it seems highly probable that the decision to adopt or at least make a trial of soiling would more frequently be made. We are persuaded that if some one well acquainted with all the details and advantages of soiling were to visit for consultation all the farmers of a county, township, or district, he would find a great number of cases in which he could recommend it as altogether superior and more profitable than pasturing, and that he would succeed in demonstrating this to the satisfaction of many. Being thus persuaded, we feel it as a duty which we owe to our readers, to make a column of our paper a substitute as far as possible for such a consulting agriculturist, and to present for their consideration that side of the question which they are most apt to overlook and under-estimate, when deliberating upon the respective merits and advantages of depending upon ordinary pasturing, and of making provisions for summer feeding, in whole or in-part, by the practice of soiling.

Let it be distinctly understood that we are very far from considering soiling preferable to pasturing in *all* cases; and we would not willingly lend any countenance whatever to such an absurdity. But we are firmly convinced that there are *some* cases in which soiling would be superior in profit, &c., to ordinary pasturing; and as the superior practice is neglected in several of the cases in which it might be adopted with advantage, we are moved by the hope of benefiting such persons to lay before them some of the considerations which should be duly pondered when a decision is to be made as to the best mode of providing food for cows, &c., during summer, or, in other words, between soiling and pasturing.

The time consumed, and the trouble and expense incurred, in cutting and carrying grass or other green fodder to the cows, &c., in their yards or stables, are usually the first thing that presents itself when soiling is proposed or taken into con-

sideration as a substitute for pasturing, and the imagination generally magnifies these items to such a degree that the question seems to be settled at once. The time, trouble, and expense of driving to and from pasture are usually forgotten, ignored, or kept out of sight. Upon this subject one who has practiced soiling and knows whereof he affirms, has given the following testimony in our volumes for 1857 (see Cult. page 271, and Co. Gent. July 30:): "I have found by actual experience, that I can feed my cows night and morning as quick as I can drive them to and from pasture, and time spent in feeding at noon is paid one hundred fold by the manure saved by keeping them yarded."

If the whole of the article from which the above is quoted be read and candidly considered, some other prejudices and objections against soiling will probably be greatly abated or entirely disappear, and the mind be thus prepared for a fair consideration of such advantages as we are now to suggest. Let the reader, therefore, turn to that article—"My Mode of Farming"—and then consider candidly the following points of superiority of soiling over pasturing: 1. Soiling requires much less land than pasturing, by which means more cows—three or four times more—can be kept on the same area, or more be taken for tilling. 2. Fewer fences are required, and thus a great saving may be effected. 3. The waste of food incident to pasturing may all be prevented by soiling. 4. The condition and comfort of cows, &c., are greater and better by soiling than by grazing. 5. Cows also give more milk, especially in a time of drouth, when pastures fail more or less. 6. Perhaps the greatest advantage of soiling arises from the greater quantity of manure which it enables the farmer to make.—*Country Gentlemen.*

**MAKE HOME AND FARMING ATTRACTIVE.**

That is the "platform" for farmers who desire their sons to become contented, successful agriculturists, instead of leaving the farm for vexatious, hazardous and unhealthy avocations. The best legacy for your sons is a substantial education—moral, mental and physical—including a *practical knowledge and love of farming*. They should thoroughly understand some occupation which is both *useful and healthy*, and therefore honorable and measurably reliable. This is of far greater consequence and value than a gift of much money or many acres. Make home and farming so pleasant and attractive that they will become so attached to Rural Life as to resist all temptations to enter into uncertain and speculative pursuits. The financial simoom which has swept over the land the past year—in numerous instances destroying the accumulations and dissipating the homes of individuals, families and communities engaged in commercial and speculative pursuits—teaches a lesson on this subject which should be heeded by all classes, and especially by the Ruralists of America. It proves that Agriculture, which feeds all and clothes all, though temporarily depressed, is the most sure and permanently reliable occupation for this life, as well as the best to fit man for that which is to come. Farmers, and Farmers' Sons, read the lesson aright!

A Hint.—Systematic labor compared with that without plan or order, accomplishes far more, and does its work with much greater ease to both mental and physical powers.

### THE PHILOSOPHY OF BATHING.

Once a week is often enough for a decent white man to wash himself all over; and whether in summer or winter, that ought to be done with soap, warm water and a hog's-hair brush, in a room showing at least 70° Fahrenheit.

Baths should be taken early in the morning, for it is then that the system possesses the power of re-action in the highest degree. Any kind of bath is dangerous soon after a meal, or soon after fatiguing exercise. No man or woman should take a bath at the close of the day, unless by the advice of the family physician. Many a man, in attempting to cheat his doctor out of a fee, has cheated himself out of his life; aye, it is heedless and carelessly done every day.

The best, safest, cheapest and most universally accessible mode of keeping the surface of the body clean, besides the once a week washing with soap and warm water, is as follows:

As soon as you get out of bed in the morning, wash your face, hands, neck and breast; then, in the same basin of water, put your feet at once for about a minute, rubbing them briskly all the time; then with the towel which has been dampened by wiping the face, etc., wipe the entire body well, fast and hard—the mouth shut, lungs inflated, breast projecting. Let the whole thing be done quick—say within five minutes.

At night, when you go to bed, and if you get out of bed during the night, or when you find yourself wakeful or restless, spend from two to five minutes in rubbing your whole body with your hands, as far as you can reach in every direction. This has a tendency to preserve that softness and mobility of skin which is essential to health, and which too frequent washings will destroy.

That precautions are necessary in connexion with the bath-room is impressively signified in the death of an American lady of refinement and position, lately, after taking a bath soon after dinner; of Surgeon Hume, while alone, in a warm bath, and of an eminent New Yorker, under similar circumstances, all within a year.—*Hall's Journal of Health.*

### RHUBARB.

Rhubarb, or pie plant, as it is commonly called, is so easy of cultivation, and such a capital institution in the way of pies and sauce, that it should be found in every garden. For a family, make a bed twelve by twenty feet, dig it well, and put in or dig in plenty of well rotted manure. Get plants of the Common Early, the Giant and the Victoria, say one row of ten plants of Giant, one row of the Victoria, and about three rows of the Common Early. Set the plants two feet and a half apart each way, keep the ground clean, keep down the seed stock, and do not gather much the first year. In the fall, put a shovelful of good manure over the crown of the root, and spade it in as early in the spring as possible, or as soon as the leaves show themselves. The great secret in raising the pie plant in perfection is to keep the ground clean and rich, and not allow seed stocks to grow. In gathering for use, select the leaf that has fully opened, and slip it off from the stem by running your finger down between the leaf stock and the stem; never cut the leaf; always pull it off as described. If properly attended, a dozen plants of each kind will furnish all that any family can well consume. The Giant is late, and

both that and the Victoria should be planted at least three and a half feet apart each way. We have found the flavor of the pie much improved by using maple sugar in preference to cane sugar. [*Rural New Yorker.*]

### TO KEEP A HORSE'S FEET AND LEGS SOUND.

The author of "The Horse's Foot—How to keep it Sound" (a little English work), in a late number of the *Journal of the Royal Agricultural Society*, concludes a paper on the subject of Horse Shoeing as follows:

"If I were asked to account for my horse's legs and feet being in better order than those of my neighbors, I should attribute it to the four following circumstances: First, that they are all shod with few nails, so placed in the shoe as to permit the foot to expand every time they move; secondly, that they all live in boxes instead of stalls, and can move whenever they please; thirdly, that they have two hours' daily walking exercise when they are not at work; and fourthly, that I have not a head-stall or rack-chain in my stable: these four circumstances comprehend the whole mystery of keeping horse's legs fine, and their feet in sound working condition up to a good old age."

"In regard to fastening the shoe—it is best allowed to expand to the weight of the horse, by placing three nails in the outer limb of the shoe, and two in the inner limb, between the toe and the commencement of the inner quarter; a larger number than five nails can never be required in any shoe of any size, or under any circumstances, excepting for the sole purpose of counteracting defective and clumsy fitting."

**SALT YOUR STOCK.**—There is a lesson taught in the following paragraph, worthy of note—for we believe that many of the diseases of stock originate from neglect in furnishing them with salt. A correspondent of the *Genesee Farmer*, says:

"I have purchased a large number of sheep for different markets. Some few years since, a gentleman rode with me several days, and I told him, before we saw the sheep, uniformly whether I could buy or not. He asked me how I told, observing that it was true, but he wished the secret. I observed that when I asked a man to show me his sheep, he would get some salt to call his sheep, so that we could see them; and when a man took two fingers and a thumb to salt with, and turn over a chip or stone to sprinkle it upon, I could not buy his sheep. I had rather turn back than go further, although we went and looked for ourselves. I saw by the two fingers and thumb, the whole man;—his sheep were poor, he fed in the same way, and set high value on all that he fed. But if a man took a handful of salt and salted plentifully, we could buy his sheep."

Another idea is, never salt in snow or frost; it will freeze their faces immediately, and a sore nose is sure.

We have from Wm. Glaze, of the Palmetto Iron Works, Columbia, S. C., in a pamphlet, a detailed account of experiments and observations upon the *Sorghum Saccharatum*, as a sugar producing Plant, by Joseph S. Lovering, of Oak Hill, Philadelphia county, Pa.

## NEW ADVERTISEMENTS.

Messrs. J. G. Proud & Sons, and Thomas B. Lewis, advertise as General Insurance Agents. We have personal knowledge of the highly reliable character of their agency.

C. F. Corser, advertises his agency for Southern States, of Bickford & Huffman's Drill.

Wm. Robinson advertises Guanoes.

H. L. P. Wolf, advertises Counting House, Office, and other furniture.

Mr. Rarey, advertises his book, teaching the art of managing horses.

L. D. Chase, offers Johnson's Sewing Machine, a new invention.

N. W. Dingee & Co., York, Pa., offer their Grain Thresher.

Messrs. Sinclair & Co., offer several superior Fanning Mills.

Messrs. Poe & Howard, advertise their Factory for Window Sash and Building Material.

Messrs. Whitman & Co., offer their Wrought Iron Railway Power.

The Philadelphia Guano Company, offer their Phosphatic Guanoes.

B. M. Rhodes, advertises his Super-phosphate of Lime.

John Dodson, offers for sale a large body of land in Virginia.

Martin Goldsborough, offers his services as General Agricultural Agent.

W. L. Boyer & Bro., offer their Clover Seed Gatherer.

Mr. Cathers renews his advertisement for cure of Cancer.

Mr. Pitt, the Guano Inspector, advertises Car-goes of Guano inspected.

D. M. Wharton, advertises a farm in Spottsylvania Co. Va.

W. O. Hickok, of the Eagle Works, Harrisburg, Pa., advertises his Cider Mill.

Mr. R. H. Evans, advertise Cottswold Ram Lambs, and Fancy Pigeons.

R. H. Sinclair & Co., advertises Peas, Buckwheat, Hungarian Grass, &c.

Robert Sears, advertises for Agents to circulate his large type Quarto Bible.

## BALTIMORE MARKET--June 29.

**Flour**—the demand for Flour is moderate, but there is a slight improvement on previous rates. Howard street Super. we quote at \$4 37½; Extra, at \$4 75 a \$5 per bbl.; City Mills, \$4.25; Extra, \$5 a 5.25; Ohio Flour, \$4.37½; Extra, \$4.75; Baltimore Ground Family, \$7 a 7.50; Extra, \$6 a \$6.50. Rye Flour, \$3.31 a 3.50. Corn Meal, \$3.25 for Country; \$3.50 for City, and \$3.70 for Brandywine Mills.

**Grain**—The market for Grain is firmer, and receipts moderate. Red, 95 a 100c. for fair to good; 103 a 105c. to prime; 107 a 109c. for choice samples; White, 105 a 112c. for fair to good; 115 a 120c. for prime, and 122 a 125c. for choice family samples. Corn has been active, but declined 1 or 2 cents in a day or two past; we quote 72 a 75c. for good to prime white; 75 a 77c. for yellow.—Rye, Maryland and Virginia, 65 a 70c.; Pennsylvania, 74c. Oats, 30 a 35c. for Maryland and Virginia; 40c. for prime Pennsylvania. Black-eyed Peas, \$3.50 per two-bushel bag. Beans, 90 a 100c. for common, and 125c. per bushel for prime.

**Cotton**—11c. cash, a 13½ 4 and 6 months.

**Plaster**—\$2.50 a \$3.00 per ton.

**Tobacco**—The Tobacco market is quiet, but no change in rates. Inferior to good Maryland crop, \$4 a 7; superior, \$8 a 11. But little Bay Tobacco arriving; we quote Tips, \$4.50 a 5.50; seconds, \$5.50 a 7; spangled, \$7 a 12; fine yellow, \$12 a 20. Ohio, common green, \$5.50; common spangled, \$6.50; common to middling red spangled, \$6.50 a 7.50; good to fine do., \$8 a 10; good to fine yellow, \$11 a 15. Kentucky, \$6 a 6.25 for large; \$7.50 a 8.50 for medium leaf; and \$9 a 12 for wrappers.

**Wool**—Receipts light, and demand limited; 16 a 18c. for unwashed; 26 a 28c. for tub washed; 19 a 24c. for No. 1 pulled; 25 a 27c. for pulled Merino; 23 a 25c. for common fleece; 24 a 26c. for quarter to half blood; 28 a 30c. for half to three-quarter; 30 a 35c. for three-quarter to full blood, and 37 a 40c. for Extra.

**Cattle, Hogs and Sheep** are all in large supply, and there has been considerable reduction in price. We quote \$3.50 a 4.25 on the hoof, equal to \$7 a 8 net, for Cattle. Hogs, \$5.50 a 6.50. Sheep, \$2 a 3 per 100 lbs., gross.

**Guano**—The season for Guano being over, there is nothing doing in it. We quote nominally Peruvian Guano at \$57 per ton of 2,000 lbs, and \$62 per ton of 2,240 lbs. Nevassa or Brown Columbian is selling at \$25 per ton of 2,240 lbs. and \$30 in lots. We note the import of 1147 tons from Chincha Islands.

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